THE DOCK & HARBOUR AUTHORITY

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Editorial

The Port of Marseilles.

The Port of Marseilles has, since the Great War, made considerable additions to the quayage of the port, and the most recent improvements and extensions are described in an article in this issue, and these extensions also form the supplement for this month's issue. For this article we are indebted to M. Gourret, Engineer-in-Chief and Director of the Port of Marseilles.

In a previous article on the Port of Marseilles, which appeared in *The Dock and Harbour Authority* for May, 1928, a plan of extensions was described, but several changes have been recorded in the original programme, both at Marseilles and its subsidiary ports, which are known as the "Annexes."

The present scheme of development comprises the construction of two new basins, these being known as the Mirabeau Basin and the Pharo Basin. The Mirabeau Basin entailed the construction of two outer breakwaters; the construction of a dock having two berthing quays, 350 metres (1,150 ft.) and 375 metres (1,230 ft.) long respectively; the construction of a berthing jetty 930 metres (3,050 ft.) long on the South Quay and 750 metres (2,460 ft.) long on the North Quay and 210 metres (690 ft.) wide; and the construction of four dry docks, one of which will be 375 metres (1,230 ft.) long. These works, which are steadily progressing, will, when completed, cost 1,000 million francs, or £14,000,000 at the present rate of exchange.

The construction of the Pharo Basin will not be commenced for some time yet, but it is proposed to extend the port to the seaward of the Joliette Basin by the formation of the Pharo Basin. This project will necessitate the construction of an outer harbour, three jetties 140 metres (460 ft.) wide and from 400 to 600 metres (1,310 to 1,970 ft.) long, and the estimated cost of these works is 420 million francs, or £6,000,000 at the present rate of exchange.

Extensions have also been made to the Joliette Basin, and these comprise the construction of two breakwaters or jetties which will form a new outer harbour; extension of the Basin towards the south; and the construction of three oblique jetties, which will have their root at the main quay, and the construction of a fourth smaller jetty. These works, when completed, will cost about 200 million francs, or £2,750,000 at the present rate of exchange. There have also been several improvements made in the equipment of the port, such as sheds and electric cranes.

New Development Scheme at the Royal Victoria and Royal Albert Docks, Port of London.

As is well known, from 1930 onwards the trade of the country as a whole suffered from the effects of the world-wide depression, and the volume of shipping and overseas traffic dealt with in the Port of London and at other ports of the United Kingdom declined. In view of these conditions, the Port of London Authority considered it wise not to embark, during this period, upon any large schemes of port extension and improvement, and they restricted their expenditure to the amount necessary to maintain existing facilities in good working order and to provide such special appliances as the immediate needs of trade required.

During the last year, however, the shipping and trade of the Port of London have shown remarkable increases, which indicate that the leeway of the slump period is being made up. The shipping that entered and left the Port during the year ended 31st December, 1934, amounted to 58,947,643 net register tons, which is actually higher than the figure for the "peak" year of 1930, and exceeded by over 20 million tons the shipping of a quarter of a century ago. The goods dealt with aggregated 39,242,733 tons, which was also a record in the history of the Port.

Apart from the increase in the volume of trade, there has been the question of the increase in the size and drafts of the vessels employed. From the time of the construction of the first dock in the Port of London, in 1802, there has been a progressive increase in the size of vessels, and each new dock has had to be built deeper and larger than its predecessors, and reconstructions and enlargements of the older docks have had to be undertaken.

During the last few months there have been important developments in the shipping using the Port. The Cunard-White Star Line have recently announced their intention to carry on their London-New York service with the motor vessels "Britannic" and "Georgic," both of which are about 27,000 tons gross, and have a maximum draft of 35 ft. In addition, several Shipping Companies trading between London and far-distant lands, such as Australia, New Zealand, India and the Far East, are now employing, or are about to employ, vessels of larger tonnage and deeper draft than was the case a few years ago.

These developments have made it necessary for various alterations to be made in the berthing arrangements in the King George V Dock, where a depth of 38 ft. of water is available. It may be recalled that the King George V Dock was opened in 1921, and cost over £4,000,000. It is forty miles from the sea and only about five miles from the heart of the City.

The Authority have reviewed all the factors, and have come to the conclusion that, in order to meet fully the requirements of the trade of the Port, deeper water should be provided in some of the docks. They have, therefore, decided to seek Parliamentary Powers for a scheme of improvement at the Royal Victoria and Albert Docks, which will involve an expenditure of upwards of £1,750,000, and take five years to complete.

The Royal Victoria Dock was constructed in 1855, and was the first unit of what has since become known as the "Royal" group of docks, the others being the Royal Albert and King George V Docks. These three docks form one system and have a total water area of 247 acres, which makes them the largest sheet of enclosed dock water in the world. The road approaches to the docks from the City have been greatly improved during the last few years, notably by the construction of Silvertown Way; and there are excellent railway facilities, the docks being linked directly with the Main Line systems of the country. The Royal Victoria Dock was built on a different plan from the other docks of the Port, the principal quays consisting of piers built out in the dock at right angles to the land and carrying warehouses or transit sheds. At the time when they were constructed, the jetties were suitable for the accommodation of the largest vessels then afloat but, judged by modern standards, they are inadequate and uneconomic, while the depth of water in the dock is too shallow.

It is proposed, subject to the sanction of Parliament, to recondition and develop the dock by sweeping away the jetties and constructing about 6,000 ft. of deep-water quayage. It is proposed, also, to build several double-storey transit sheds, to equip the berths with electric quay cranes and to re-model the roads and railways. The depth of water will be increased from 28 ft. to 31 ft., and in order to make this depth effective the tunnels which carry the railways of the London and North-Eastern Company under the water passage between the Royal Victoria and the Royal Albert Docks will be lowered. The two special berths, which were provided a few years ago for the South American meat trade in the Royal Victoria Dock, will not be affected by the scheme, except that they will be accessible to larger ships, and the dock will continue to be the chief warehousing place in the Port for tobacco and the principal centre of the London flour milling trade.

At the Royal Albert Dock it is proposed to construct a new quay, 5,350 ft. in length, on the north side of the dock, and to increase the depth of water from 29½ ft. to 34 ft.

As already mentioned, it is estimated that the whole of the work will take about five years to complete, and it will be done in stages so as to minimise the dislocation of shipping and goods traffic.

It is perhaps fitting that the commencement of this important scheme for the improvement of the "Royal" group of docks should take place in the Silver Jubilee year of H.M. the King, who, in 1921, formally opened the King George V Dock, which has become the most popular section of that group.

Great Western Railway Docks

Improvements carried out during 1934

THE railways of this country are all, more or less, interested in ports, and some of the biggest docks in Britain are owned by railway companies. None of the companies owns a larger or more important system of docks than the Great Western Railway. Their docks, naturally, are for the most part on the western side of the country, principally on the South Wales Coast. For this reason, they are frequently termed "Britain's Western Gateways."

Loading Tinplates, Galvanised Sheets, etc., by Electric Cranes at Newport Docks.

It was not until the amalgamations of 1922, which followed the Railways Act of 1921, that the Great Western Railway Company became the proprietors of the great docks on the South Wales seaboard. The important ports of Newport, Cardiff, Penarth, Barry, Port Talbot and Swansea (taking them in line from east to west) had been created mainly by the development of the exportation of Welsh coal. They all originated in a different proprietorship, and each (except Swansea) belonged to a separate railway company. It must be said, however, in respect of these railway companies, that the docks were rather more their dominating property than the railway itself. At the same time, the railway lines were very important in affording communication between the coalfields and the respective docks, not only for coal and other merchandise, but for passengers as well.

It is not the intention to enter into a history of the South Wales Docks, but it may be mentioned that the provision of dock accommodation on that coast was commenced a hundred years ago—in the early eighteen-thirties. There is no doubt that maritime trading along this coast took place earlier than history records. Traces of Roman galleys and other ancient craft have turned up from time to time during excavation work for the docks and other undertakings, pointing to the fact that the outlets of the various rivers, affording as they did so many natural harbours, had been used by adventurous maritime traders from early and primitive times. The discovery of the virtues of Welsh coal gave a tremendous fillip to the commerce of the district, and led first to the introduction, and then the continuous expansion of the dock accommodation.

As far back as October, 1839, the first dock at Cardiff, the Bute West Dock, was opened. Even this had been preceded by the Glamorganshire Canal. At the seaward end of the Glamorganshire Canal, a sea-lock had been constructed, which was opened in 1798. This sea-lock gave a means of holding up the waters of the canal, and forming a lock for the admission and sailing of ships, thereby constituting the lower length of the canal into a kind of long dock. Actually, this canal and its seaward length, are still in use to-day by small coasting craft, but the canal is privately owned by the Glamorganshire Canal Company.

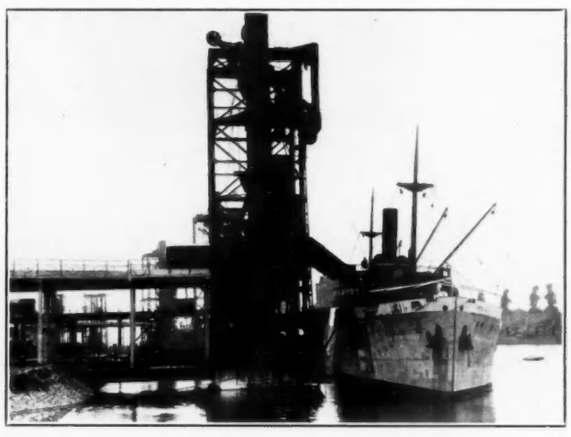
The Bute West Dock marked a very great advance in the permanent floating accommodation for ocean-going ships; and although its lock is only 152 ft. long by 36 ft. wide, it still affords excellent accommodation for coasting craft and vessels trading with the Continent. This dock was constructed as a private enterprise by the then Marquis of Bute. It was the beginning of the great system of Bute Docks at Cardiff, being followed by the Bute East Dock, the Roath Basin and Dock, and the Queen Alexandra Dock. The last-named dock was opened, in 1907, by King Edward VII. and Queen Alexandra.

By 1922, the Cardiff Docks were owned by the Cardiff Railway Company, although the Bute family had considerable financial interest therein. On the transfer to the Great Western Railway Company, under the amalgamation, the latter Company agreed to the Cardiff Docks being henceforth known as the Bute Docks, Cardiff. This is probably an unique instance of a perpetual association of a system of docks with the name of the family by which they were instituted, and is virtually a monument to private enterprise.

Newport Docks were owned by the Alexandra (Newport and South Wales) Docks and Railway Company; Penarth Dock by the Taff Vale Railway Company; Barry Docks by the Barry Railway. These railways all became amalgamated with the Great Western Company under the Railways Act. Port Talbot Docks were owned by the Port Talbot Railway and Docks Company, and this became absorbed in the Great Western Railway under the same Act.

The Swansea Docks and Harbour were in a different category from the other important South Wales Docks. Here the docks were owned by a Harbour Trust, which was practically controlled by the Borough Corporation. The reduction in tonnage passing through this port, owing to the effect of the war, had created a very difficult financial situation. Various loans had been arranged from time to time by the Swansea Harbour Trust, by means of which they built the important extensions to their docks, necessitated by the expansion of the trade of the port. The interest payments on these loans, however, were seriously in arrears. Negotiations were opened with the Great Western Company, and an amicable arrangement arrived at, which resulted in the Swansea Docks being vested in the Great Western Railway Company, as from the 1st July, 1923. It was thus that the Great Western Company became the responsible owners of this great chain of ports on the South Wales Coast.

The vast development in the South Wales coal export trade had been continuous up to 1914, but the War and its consequent upsetting of the world's international commerce, made an enormous difference to the coal trade of South Wales. Another effect of the long War period was that the development and upkeep of equipment at the docks had not followed their normal course. When the Docks became amalgamated under the Great Western Railway Company in 1922, therefore, that Company was faced with a problem in the fact that the facilities of the docks were not of the most modern description. The Company embarked on a programme of improving the appliances and equipment at the docks generally, which has since been steadily pursued, notwithstanding that the wave of trade depression of the past few years has hit the South Wales Docks hardly in the matter of tonnages of imports and exports passing through the docks. Only the inherent faith of the Company in trade recovery could have justified the continuous expenditure which has been devoted to the South Wales Docks during the past decade.

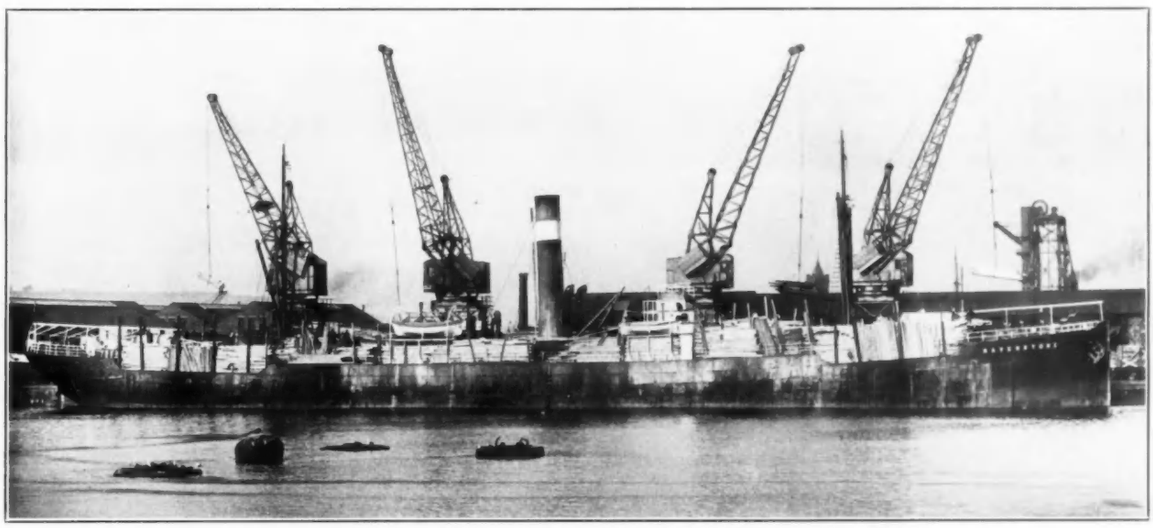


New Coal Shipping Hoist, Barry Dock.

It should be borne in mind that although the shipment of coal has been the preponderating feature of the work at the South

Great Western Railway Docks

Aerial View, Barry Docks.



Discharging Canadian Deals, Queen Alexandra Dock, Cardiff.

Aerial View, Port Talbot Docks.

Great Western Railway Docks—continued

Customs Examination of Jaffa Oranges in Transit Shed, Cardiff.

Wales Docks, they have been, and are, the avenues of a very considerable traffic, both imports and exports, of other goods. The coal trade itself means the importation of a considerable quantity of pitwood and mining timber generally. Ordinary timber and deals also ferm a very important factor in the import traffic, and another large tonnage brought into the docks is that of iron ore, for the Iron and Steel Works. The manufacture of tinplates is a business highly specialised in South Wales, and huge shipments of this article take place each year, particularly at Swansea. Grain and flour are also handled in large quantities, the incoming tonnages being especially high at Cardiff, Barry and Swansea Docks. The exports of other manufactured iron and steel, such as blackplates, galvanised sheets, steel tubes, rails and railway material generally, form another important trade, and cement manufactured in the district also find its outlet through the docks.

The oil traffic, again, has increased very considerably in recent years. At Swansea Docks are situate the import and export wharves of the National Oil Refineries, a subsidiary of the Anglo-Persian Oil Co., their refining works being at Llandarcy, about four miles east of Swansea. These works are connected with the wharves at Swansea Docks by the necessary pipes for conveying the crude oil to the works, and the manufactured spirit, etc., to the docks for shipment. This traffic at Swansea has assumed huge dimensions. There are also oil depots at Briton Ferry, Penarth Harbour and Cardiff Docks.

Cardiff Docks form the centre of an important business in the importation of fruit, foodstuffs, and general goods for distribution in South Wales and the Midlands. Another traffic which has developed very appreciably at Cardiff is the importation of Canadian cattle.

The restriction of international commerce since the War has naturally diminished the tonnages handled through the South Wales Docks, as well as at the various other ports of the country.

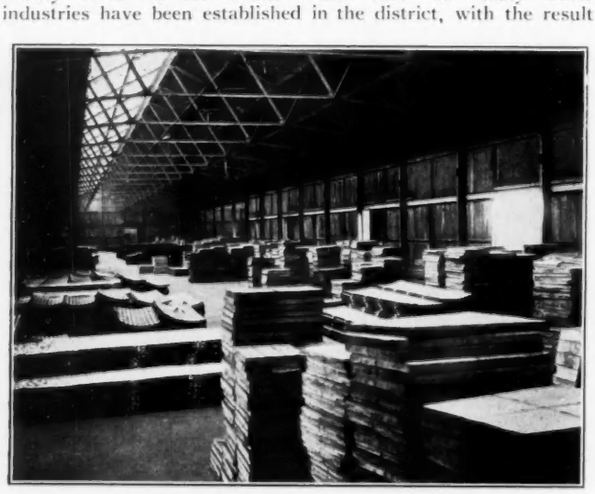
The exports of Welsh coal were particularly hard hit, as will be seen from the fact that while in 1913 shipments of this commodity were 38 million tons, at present the volume is about 20 million tons per annum. Having regard to this fact, it is doubly fortunate for South Wales that so many other industries have been established in the district, with the result that the tonnages handled through the docks, including the coal traffic, still amount to 25,300,000 tons annually. With the improvement in trade, there is a reasonable prospect that the business through the South Wales Docks will now again take an upward turn, the fall having been remarkably arrested in 1934.

Introduction of 20-ton Coal Wagons.

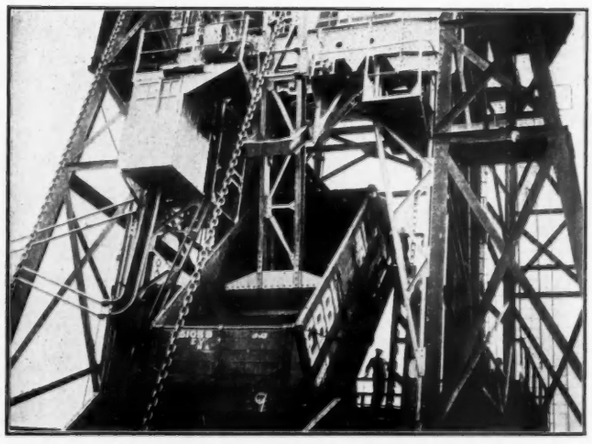
When the Great Western Railway Company became the owners of the docks in 1922, one of their first general decisions of policy was to encourage the introduction of wagons of a capacity of 20 tons, for the conveyance and shipment of coal. At that time the maximum capacity of wagons used for that purpose was 12 tons. The Colliery Companies and other Wagon Owners were encouraged to adopt the larger wagons by special discounts off the ordinary charges for conveying and shipping coal conveyed in these wagons. The most important effect of the policy was, however, the fact that the Company had to face the provision at the docks of coaling appliances capable of dealing with the bigger wagons. Except in a few isolated instances, all the appliances were built for the 12-ton wagons. This meant the planning of the introduction of sufficient 20-ton appliances at each of the docks to keep pace with the introduction of the larger wagons, while at the same time not interfering with the ordinary demands for shipment. In one sense the reduction in the quantity of coal offering for shipment may have been a blessing in disguise, because the carrying out of the programme for the provision of the 20-ton machines has been allowed to proceed without interruption. In a few cases it was possible to adapt existing appliances, but in the great majority new hoists have had to be built. Often this has meant a corresponding improvement and rearrangement of the feeding lines, and altogether the expenditure has run into more than a million pounds.

During 1934 two new 20-ton hoists were completed at Roath Basin, Cardiff; one at King's Dock, Swansea; and two at Barry Docks. With the completion of these, the number of coaling appliances now capable of dealing with 20-ton wagons at the respective docks is as follows:—

Cardiff, 21 (including one nearing completion); Swansea, 17 (including two L. M. and S. appliances); Newport, 13; Barry, 17; Port Talbot, 8; Penarth, 4—a total of eighty 20-ton appliances.



Tinplates and Galvanised Sheets in Transit Shed, Swansea Docks.



"Norfolk" Digging-out Appliance, for dislodging coal which does not run freely.

GWR DOCKS

CARDIFF SWANSEA

NEWPORT BARRY

PORT TALBOT PENARTH

PLYMOUTH, &c.

The Great Western Railway Company's South Wales docks at CARDIFF, SWANSEA, NEWPORT, BARRY, PORT TALBOT and PENARTH offer first-class shipping facilities for the development of all classes of overseas commerce. Millions of tons of Welsh coal are shipped from these docks to all parts of the world, and in addition the docks deal with a huge tonnage of general imports and exports. The facilities for loading and discharging all classes of cargoes are maintained in the highest efficiency.

At PLYMOUTH, on the South Coast, the Great Western Company own the Millbay Docks, and their Tenders meet all ocean liners calling at Plymouth. The passengers and mails are landed at Plymouth Docks, and the passenger and mail trains run alongside the landing places. Travellers have an extra day in England by the use of Plymouth for overseas voyages.

Aerial view of G.W.R. Bute Docks, Cardiff.

The Great Western Railway system affords rapid transit between the Docks and all parts of Great Britain.

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The geographical position of the Docks makes them very suitable for the development of overseas trade to and from South Wales, the Midlands, and other parts of Britain. They are truly

"BRITAIN'S WESTERN GATEWAYS"

SITES FOR NEW WORKS, etc., are available at the Company's Docks with deep water and railway facilities.

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Business enquiries can be addressed to the Dock Manager at any of the Docks, or may be sent direct to—Charles S. Page, Chief Docks Manager, Great Western Railway, CARDIFF.

JAMES MILNE, General Manager - - - Paddington Station, London, W.2

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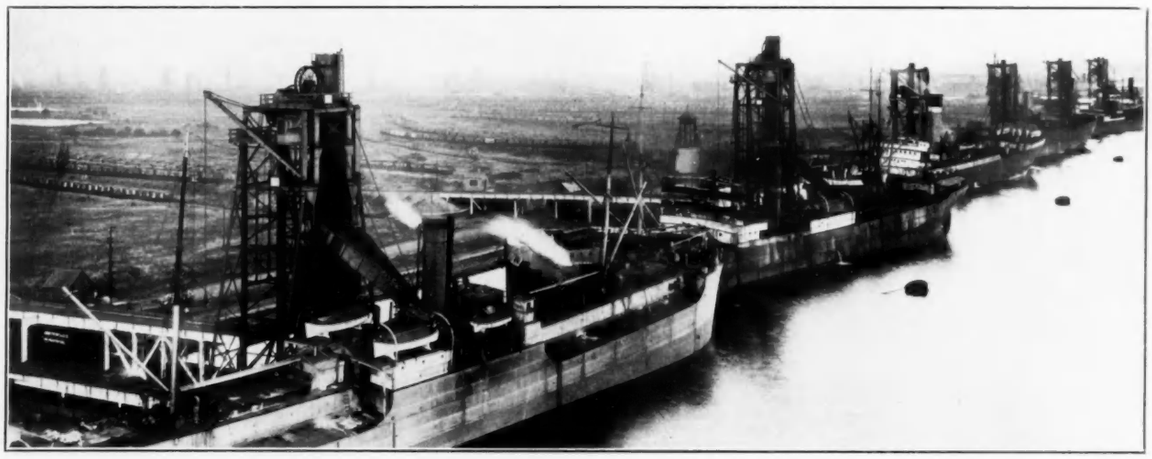
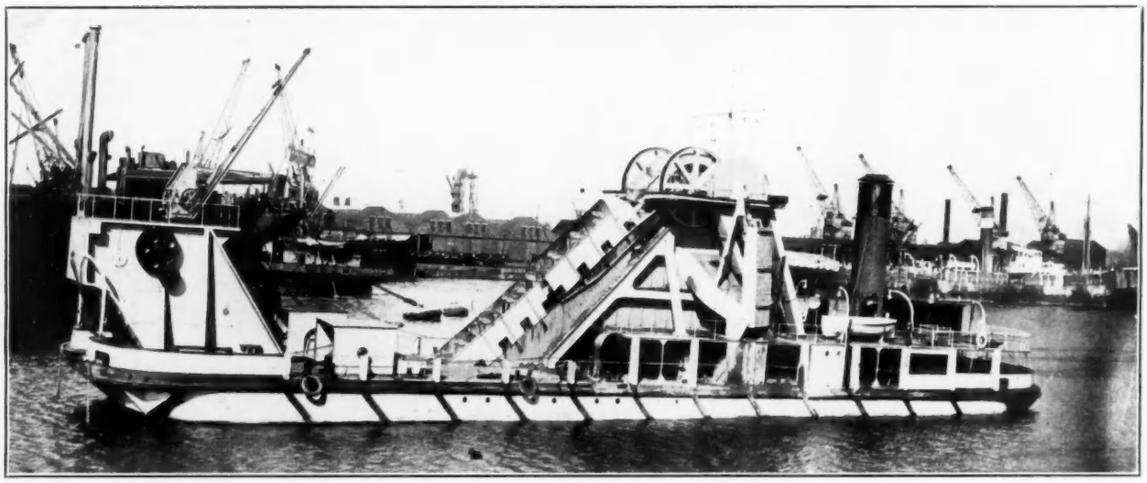
Great Western Railway Docks



Battery of Coal Shipping Hoists, Alexandra Docks, Newport.



New Dredger "Foremost 49" for South Wales Docks.

Aerial View, Swansea Harbour and Docks.

Great Western Railway Docks—continued

Two New Coal Shipping Hoists, Roath Basin, Cardiff Docks.

Belt Conveyors.

At the present time there is under construction a Belt-Conveyor type of coal-shipping appliance, at the Roath Dock, Cardiff. This is the second of that kind of appliance erected at the Roath Dock, the first having been brought into operation some two years ago. These two machines have been placed at Roath Dock as part of the scheme for reproducing the whole of the coal-shipping appliances at that dock with modern equipment.

New Movable Coal Shipping Hoist, King's Dock, Swansea.

Prevention of Breakage of Coal at Shipment.

One of the matters to which the Great Western Company has devoted considerable attention is the prevention of breakage of coal at shipment. As the result of special investigation and experiments, they introduced a type of anti-breakage appliance new to South Wales, having become convinced that it offered the best means for avoiding undue breakage of the coal during the process of shipping. This is an escalator type of appliance, known as the "Handcock" Anti-breakage Appliance. It consists of a series of trays or shelves working on an endless belt. The appliance is adjusted at the nose of the shute of the coal-shipping appliance. It receives the coal from the shute without any drop, and conveys it to the bottom of the hold, or on to the top of the pile of coal already in the ship. Thus there is no appreciable fall of the coal, which slides from the wagon, down the shute, on to the shelf of the anti-breaker, on which it rests until it has been conveyed down and tilted on to the pile of coal already in the ship. These appliances have now been provided to the number of 34, distributed as follows:—

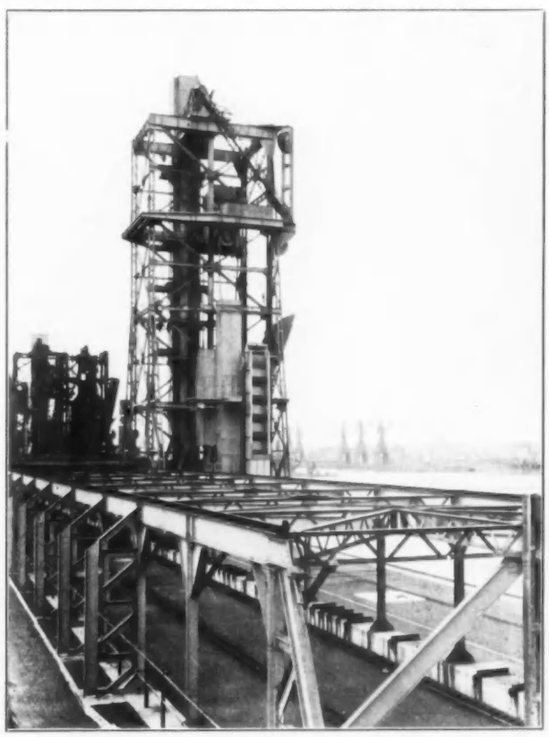
Cardiff, 4; Swansea, 3; Newport, 2; Barry, 3; Port Talbot, 3.

Shipment of Washed Coal.

A problem that has become considerably accentuated during recent years is the shipment of coal which has been washed at the collieries, and has a tendency to adhere together in the wagons. South Wales Collieries have found that by washing coal and grading it to various sizes, they have been able to establish markets for these washed coals to an ever-increasing degree.

Some of the smaller varieties of washed coal presented difficulty in shipment, in that the tilting of the wagon to the ordinary shipping angle did not dislodge the coal. Various experiments were made, and eventually the Great Western Railway Company decided to try the "Norfolk" Digger, the invention of Mr. T. L. Norfolk, Engineer-in-Chief to the Mersey Docks and Harbour Board. This machine is a mechanical spade, which is attached to the coal-shipping appliance. By its means wet or sticky coal can be dislodged from a wagon in a few minutes, an operation that often took the better part of an hour when done manually. During 1934 nine of these appliances were provided at various docks, making the equipment of these devices now:—

Cardiff, 4; Swansea, 3; Newport, 2; Barry, 3; Port Talbot, 2; Penarth, 1.



New Movable Coal Hoist at Newport Docks.

Storage Sidings.

Other improvements introduced in connection with the coal shipping business by the Great Western Company included very extensive additions to the storage siding accommodation at a number of the docks. The latest scheme of this description was the one which was in hand at Swansea during 1934. Towards the end of 1933, the Rhondda and Swansea Bay Rail-

Great Western Railway Docks—continued

Aerial View, Alexandra Docks, Newport.

way Lines, running adjacent to Swansea Docks, were closed to passenger traffic, this being transferred to the G.W.R. Vale of Neath Line adjoining. Henceforth, the R. and S.B. Lines were devoted to traffic to and from the docks only. This was part of a scheme by which the reception and storage sidings for traffic for Swansea Docks were entirely re-modelled and considerably enlarged. A new Hump Yard, with new reception, riddling and storage siding yards, were laid down, and the scheme was completed towards the end of 1934. These new works enable traffic to and from Swansea Docks to be dealt with very expeditiously.

General Cargo Equipment.

On the general cargo side, considerable work has been done to improve the facilities. New general cargo transit sheds were provided, storage sidings re-modelled and enlarged, and lengths of quay added and equipped for general cargo purposes. One important innovation was the decision to substitute hydraulic cranes by modern electric luffing jib cranes wherever this was convenient. Since 1922 the Company have provided no less than 99 cranes, including one floating crane, which is able to lift 125 tons. The latter crane is available for special lifts at any of the principal South Wales Docks.

Miscellaneous Works.

Numerous other works have had to be carried out. In many cases these were of an inconspicuous nature, so far as the public were concerned. For instance, almost every one of the lock gates at the South Wales Docks has either been renewed or had extensive repairs carried out to it. This was exemplified during 1934 by new lower lock gates having to be provided for the Junction Lock between East Dock and Roath Basin, at Cardiff; and both the inner and outer pairs of the Roath Lock Sea Lock Gates were dry-docked for overhaul, strengthened and replaced in their working positions during 1934. Another work that required attention at considerable cost during that year was the extensive reconstruction of the outer West Roundhead at the approach to the King's Dock Entrance at Swansea.

New 15-ton Electric Crane, G.W.R., Commercial Graving Dock, Cardiff.

In recent years, also, the hydraulic plant for working the lock gates, driving coaling appliances, etc., at most of the docks, has been thoroughly overhauled, re-organised, and a large proportion of the mains renewed. A notable instance of this kind of work was at the Bute Docks, Cardiff, where no less than ten different power stations were in operation at the time of the amalgamation; these various power stations had been built at different times during the development of the Cardiff Docks. By a reorganisation, the number of power stations was reduced to three, of which it has only been necessary to retain two in operation, the remaining one being kept as a spare source of power when necessary, as, for instance, during repairs to either of the other stations. The main hydraulic power station is equipped with electrically-driven pumps, steam having been substituted by electricity in the driving of hydraulic plant wherever convenient. The second power station is steam-driven, but the spare station is also being electrified at the present time. In pursuance of this policy, the hydraulic power plant at Barry Docks was converted to electric drive, this work having been completed in 1934.

The Commercial Graving Docks are owned by the Great Western Railway Company at Newport, Cardiff, Barry and Plymouth, and one of the improvements carried out in 1934 related to the Dry Dock at Cardiff, being the provision of a modern 15-ton electric crane. This considerably facilitates the transfer of parts to and from boats under repair in the Dry Dock.

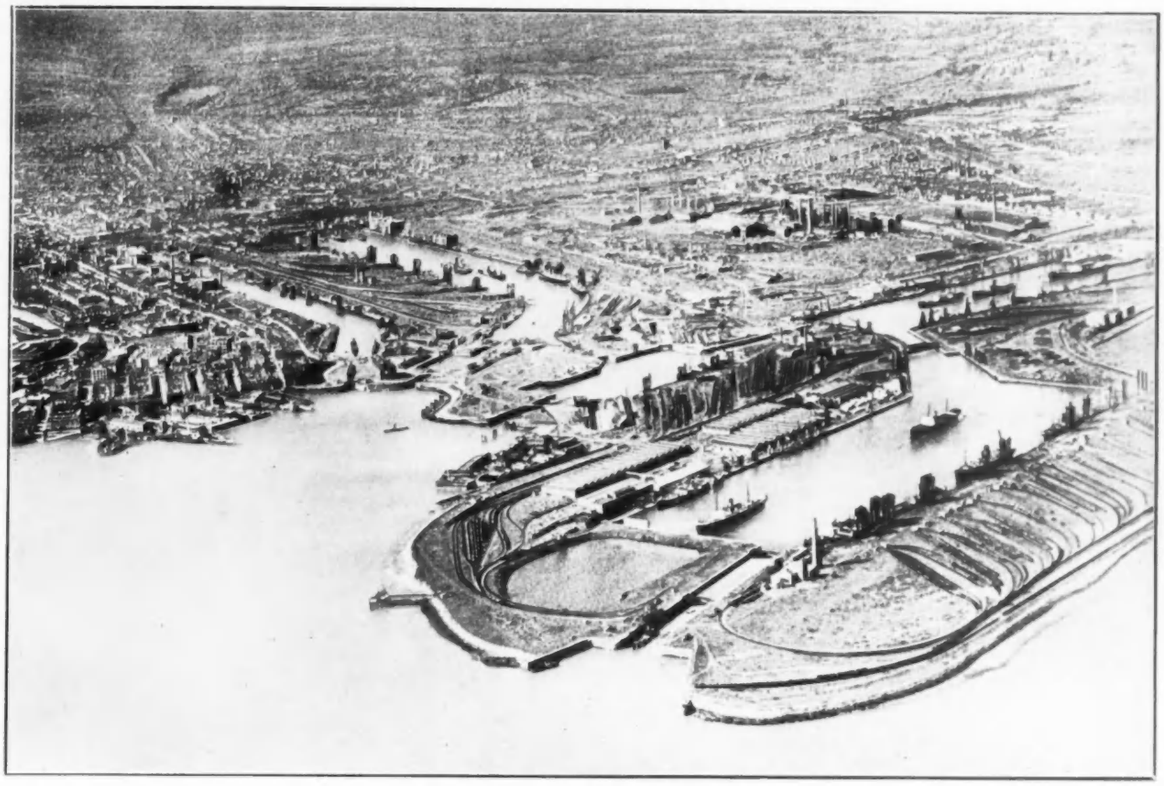
Dredging.

Owing to the large proportion of silt held in suspension in the waters of the Bristol Channel, the cost of dredging in connection with the docks on the South Wales Coast is a very heavy item, and a fleet of six bucket ladder dredgers, three grab dredgers, and 10 steam hoppers, is maintained for the work, together with sundry subsidiary craft. During 1934 a new stationary bucket ladder dredger, "Foremost 49," was acquired for the fleet.

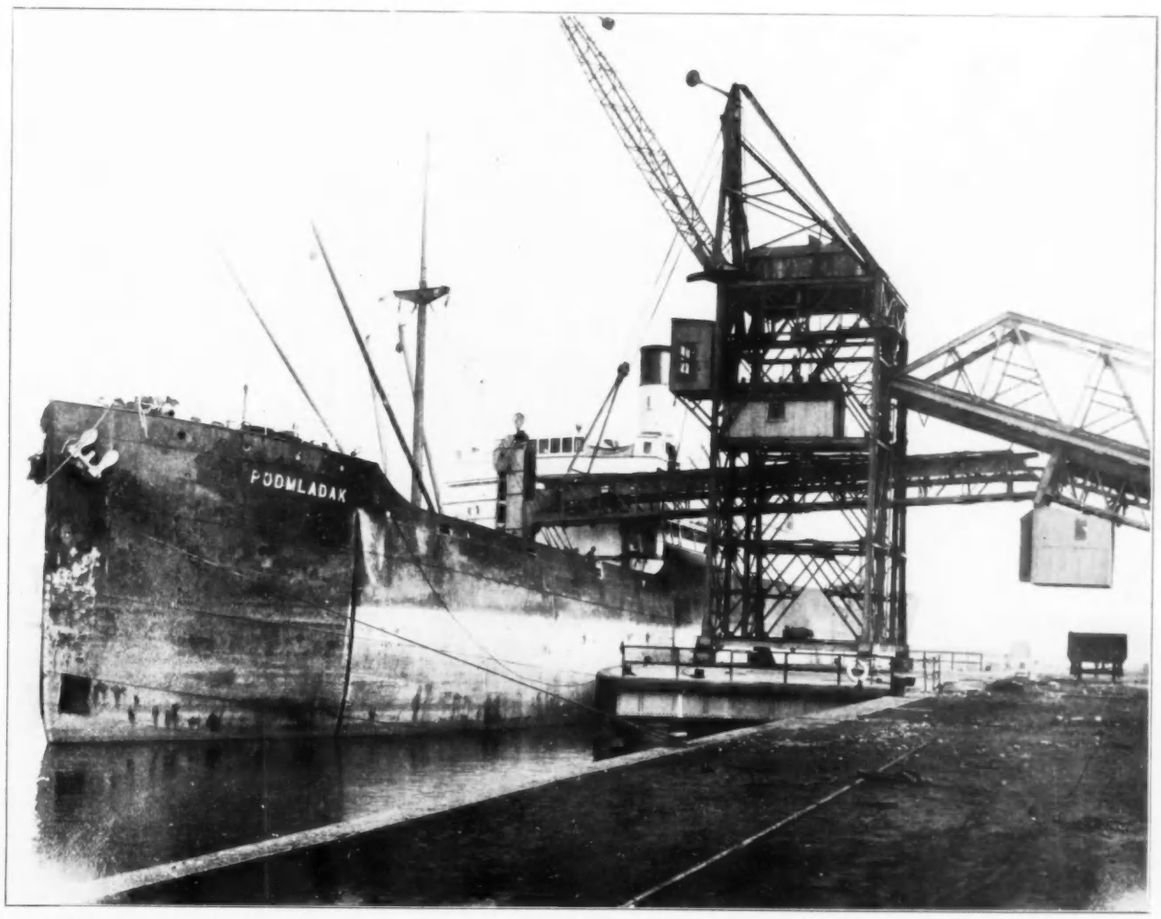
Trade Prospects.

The extent to which the international trade depression affected the traffic dealt with through the South Wales Docks is seen when it is mentioned that in 1913 the aggregate imports and exports amounted to 47,000,000 tons, whereas in 1934 the total was 25,300,000 tons. It has already been explained that

Great Western Railway Docks



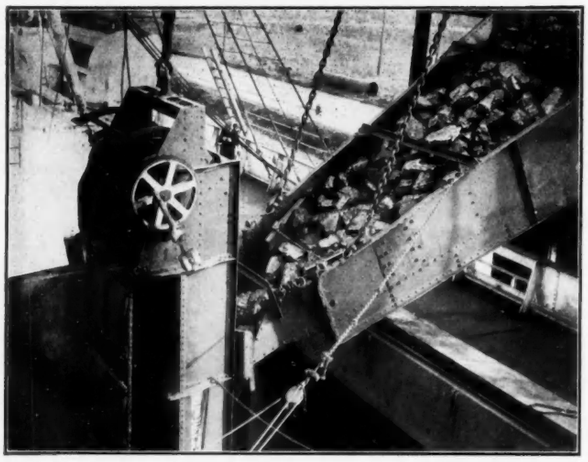
Aerial View, Bute Docks, Cardiff.



Belt Conveyor Type of Coal Shipping Appliance, Roath Dock, Cardiff (Anti-breakage Escalator seen in position at delivery end of Belt).

Great Western Railway Docks—continued

the bulk of this decrease was due to the falling off in the shipment of coal, resulting from causes such as the development of collieries in other countries (assisted by devices such as subsidies and import limitations), competition of oil fuel, and restriction of international trade generally.



Shipping Large Coal through Escalator Anti-breakage Appliance.

While the quantity of traffic dealt with in 1934 is, however, relatively so much smaller than in the peak year of 1913, nevertheless there was an important significance in the 1934 figures. That year marked an increase of nearly 400,000 tons over the previous year. This is considered to be indicative of a check in the depression. Already the iron and steel industry in South Wales has shewn a marked advance, and the exports of general manufactured iron and steel from the South Wales Docks in 1934, which amounted to 304,000 tons, shewed an increase over the previous year of some 35,000 tons. The total coal shipments also for last year shewed a substantial increase over 1933, and practically every other traffic dealt with through the docks shewed an improvement.

There is no doubt that the South Wales Docks are admirably equipped for dealing with much larger quantities of traffic than at present are passing through the docks. They are well served by general cargo lines to all quarters of the globe, and can accommodate the largest general cargo ships.

Plymouth Docks.

The Great Western Company are also the owners of the Millbay Docks at Plymouth, at which a large general cargo trade is done, particularly in the importation of grain for the western counties area. An important part of the work at Plymouth is the handling of the passengers and mails from and to the ocean liners which call at the port. These liners anchor in the famous Plymouth Sound, and the bags of mails, and passengers and their baggage, are conveyed between ship and shore by the Great Western Railway tenders. These are first-class vessels, which land and embark the passengers in the Millbay Docks. The passenger trains connecting with all parts of the country, run alongside the tender berth, so that the transfer of passengers and mails is most conveniently and expeditiously effected.

Docks Department.

When the Great Western Railway became so largely interested in docks after the amalgamation, they set up a separate department, under a Chief Docks Manager, for the control of the docks. That department also controls the passenger steamers of the Company, on the Irish and Channel Islands services. The present Chief Docks Manager is Mr. Charles S. Page, the headquarters of the department being at Cardiff, in the centre of the main docks area.

Aden Port Trust

The returns of shipping using the Port of Aden for the month of January, 1935, as as follows:—

	No.	Tonnage
Merchant Vessels over 200 tons ...	132	575,094
,, ,, under 200 tons ...	5	810
Government Vessels	15	32,474
Dhows	98	4,273
PERIM.		
Merchant Vessels over 200 tons ...	19	71,229

The total value of imports, excluding Government Stores, was Rs. 50,99,000/-, as compared with Rs. 44,58,000/- for January, 1934, and exports Rs. 29,34,000/-, as compared with Rs. 30,40,000/-.

The total value of both imports and exports together was Rs. 80,33,000/-, as compared with Rs. 74,98,000/- for the corresponding month last year.

Imports during the month were above those for January, 1934, in the case of grain, pulse and flour, hardware, raw hides, seeds, grey, white and printed or dyed piece-goods, twist and yarn, unmanufactured and manufactured tobacco, and private treasure; and below, in the case of coffee, gums and resins, raw skins and sugar.

Exports were above those for January, 1934, in the case of coffee, raw hides, seeds, white, printed or dyed piece-goods, twist and yarn, unmanufactured and manufactured tobacco, and private treasure; and below, in the case of grain, pulse and flour, gums and resins, hardware, raw skins, sugar and grey piece-goods..

TRADE OF THE PORT.

Article.	Unit	Imports		Exports	
		Quantity.	Value Rs.	Quantity.	Value Rs.
Coal	Tons	8,572	1,75,000	0	0
Coffee	Cwts.	6,302	1,89,054	8,404	3,13,422
Grain, Pulse and Flour	,,	56,857	2,55,386	24,931	1,13,609
Gums and Resins	,,	2,502	31,654	1,164	17,136
Hardware	—	0	26,121	0	20,820
Hides, raw	No.	3,405	2,754	12,188	16,503
Oil, Fuel	Tons	53,887	15,31,140	0	0
,, Kerosene	Gls.	36,248	24,650	4,272	3,022
,, Petrol	,,	22,875	23,513	544	557
Salt	Tons	0	0	41,824	4,12,362
Seeds	Cwts.	3,691	28,612	1,964	14,366
Skins, raw	No.	384,444	2,09,799	463,672	3,86,533
Sugar	Cwts.	27,000	1,20,177	17,457	79,573
Textiles—					
Piece Goods, Grey	Yds.	4,276,230	5,68,544	1,996,590	2,52,711
,, ,, White	,,	727,694	1,07,689	369,880	61,137
,, ,, Printed or Dyed ..	,,	1,804,893	2,92,577	1,349,430	2,84,790
Twist and Yarn	Lbs.	245,200	1,09,607	189,307	87,248
Tobacco, Unmanufactured	,,	348,817	45,646	385,378	83,277
,, Manufactured	,,	65,947	57,544	46,080	25,112
Other Articles	No. of Pkges.	68,264	10,92,912	22,268	3,97,387
Treasure, Private	—	0	2,06,690	0	3,64,780
Total ...	—	—	50,99,069	—	29,34,345

The number of merchant vessels over 200 tons that used the Port in January, 1935, was 132, as compared with 124 in the corresponding month last year, and the total tonnage was 575,000, as compared with 509,000.

Excluding coal, salt, fuel oil and Military and Naval Stores and transhipment cargo, the total tonnage of imports in the month was 10,500 and of exports 5,300, as compared with 11,300 and 6,900 respectively for the corresponding month last year.

North-East Coast Notes

ONE of the most interesting statements to the North made in recent months was that of Mr. Oliver Stanley, Minister of Labour, in the House of Commons in March. It was that the Commissioner for Special Areas (Mr. P. Malcolm Stewart) had intimated to the Tyne Commissioners that he is willing, within the terms of the new Unemployment Act, to give the Commissioners financial assistance towards the construction of a deep-water quay on the Tyne between Jarrow and South Shields. Up to the time of writing the officials of the Tyne Commission had declined to give any supplemental details of the matter, but it is assumed that the grant would be made in furtherance of the Jarrow Slake scheme, or at least that part which relates to a deep-water quay. In a report prepared by Jarrow Council for the guidance of the Commissioner, it was stated that Jarrow Slake with a water area of about 170 acres at high water, if developed, would have the effect of not only providing deep-water quays for the Slake but of enhancing the value of the surrounding land for industrial purposes. The scheme is an important one, about which we will hear more in the not distant future.

Tyne Commission Finances.

Mr. Francis Priestman, chairman of the Finance Committee of the Tyne Commission, in his statement to that body on the 19th February, had some very satisfactory things to say. The year then just closed, he said, had not been entirely uneventful. The export of coal and coke had increased by 1,138,000 tons, the imports and exports of merchandise had shown a substantial advance over those of 1933; the revenue had increased by £21,000, the expenditure was less by £9,000, and after meeting all commitments, including the contribution to the redemption fund, there remained a surplus of receipts over expenditure of £13,000, against a deficit of £20,000 in 1933. That was the story in brief of 1934. In submitting to them, last year, the report for 1933, he expressed no personal forecast of what 1934 would produce, but he thought he was not going too far in saying that at that time there was a fairly general concensus of considered opinion that the trend was in the direction of betterment; that 1934 would bring with it an increased volume of trade with a resultant increase in employment. The figures that he had just quoted proved that that opinion was well founded. Whilst 1934 produced a larger volume of trade to the Tyne than any one of the three preceding years, it was unfortunate that the latter part of the year did not maintain the progress they saw in the first nine or ten months. But for that there would have been a better story still to tell. In regard to the reduction in expenditure there were one or two interesting features. The principal item of reduction was in interest on the Commissions' Loan debt. There had been a saving on that head of £15,000, compared with the amount paid in 1933. Following the high security of British credit and the lowering tendency of the interest yield on gilt-edged securities to something less than a 3 per cent. basis the Finance Committee maintained during the whole of 1934 their policy instituted in April, 1933, of offering 3½ per cent. for loans maturing. It was a striking tribute to the continued high standing of the Commissioners' credit with the investing public that 71 per cent. of the loans approaching £500,000 which matured during the year were renewed at that rate. No additional loans were taken up during the year. The renewal of the maturing loans was satisfactory, and the Commissioners had no heavy commitments for new works. The nett result was that the Commissioners' loan debt was reduced during the year by £142,000 which, following a reduction of £219,000 in 1933, made in two years a total reduction of £361,000. He added that, as the result of the acceptance of the reduced rate of interest offered the average rate of interest on the whole of the Commissioners' loan debt fell from £4 3s. 7d. per cent. at the end of 1933, to £4 1s. 4d. per cent. at the end of 1934, a saving of 2s. 3d. per cent., equal to £3,600 in a full year, and of their total loan debt of just over £3,000,000 1¾ millions now carried rates of 4 per cent. or under.

Referring to the coal trade again, Mr. Priestman said the trade agreements entered into between the British Government and certain foreign governments had been helpful. That could not be questioned. The agreements had provided a fixed volume of trade between Great Britain and the signatory countries free from competition by other countries, but they had had one adverse effect, e.g., they had forced our foreign competitors into markets with which there was no trade agreement. The Tyne did not appear to have suffered to any great extent, if at all, in that direction, but a study of the national figures was a clear indication that that had been the result. Concluding, he said he had no intention of anticipating 1935. Industrial conditions were too difficult to be able to make any forecast as to the future, but the immediate future did hold possibilities. One observation he made with confidence if there should be anything that the Tyne Commissioners could do to bring increased prosperity, it would be done.

Tyne Improvement Commission Appointments.

Two noteworthy appointments were made at the February meeting of the Tyne Improvement Commission's meeting when Mr. H. W. Greany, London and North-Eastern Railway goods agent at Hull, was appointed senior assistant to the secretary; and Mr. N. M. Hood, assistant traffic manager to the Port of Preston Authority, was appointed senior assistant to the general manager. Mr. Greany was dock superintendent at Tyne Dock from May, 1931, until October, 1933, when he was appointed goods agent at Hull. Mr. Hood joined the clerical staff of the Great Western Railway in 1907, and subsequently held an appointment under the Port of Bristol Authority. He went to Preston in 1923. In each case the starting salary was £750 per annum, rising by annual increments of £50 to a maximum of £900.

More Records of Smart Work.

Records of smart work continue to come to hand, and here are three notable instances. On February 18th, the London and North-Eastern Railway Company reported that the record rapid loading made at Tyne Dock on January 17th last had been eclipsed, when the steamer "Marchioness" loaded 910 tons of sulphate of ammonia, and 200 tons of bunker coal in ten hours, using three cranes. At the same time exceptionally rapid discharge work took place when the "Blackhill" discharged 1,415 tons of iron ore and the "Mar Baltico" 2,087 tons on February 4th. The discharging rates of the two vessels were 177 tons and 155 tons per working hour respectively. About the same time a series of loading feats were carried out at the Harton Coal Co.'s Low Staiths, South Shields, when three vessels loaded a total of 5,300 tons of coal in a little more than 15 hours, and established a record for the Mill Dam. The vessels concerned were the "Flathouse," which loaded 2,200 tons, the "Suntrap" 1,300 tons, and the "Torchbearer," which loaded 1,800 tons.

An instance of smart loading at Blyth was reported also. The steamer "Fairy" arrived at 6.30 p.m. on February 9th, and sailed at 8.30 p.m., having in two hours taken on board 300 tons of coal cargo and bunkers.

Progress on the Tees.

At the March meeting of the Tees Conservancy Commission the improved condition of the river was commented upon by Alderman Davies, Chairman of the Works Committee, when speaking upon the annual report of the chief engineer, Mr. Percival A. R. Leith. He said: "We have been doing very much more dredging between the transporter bridge and the upper reaches of the river, and this has been done because of the increasing number of large vessels navigating the upper reaches. During the past year 1,200,000 cub. yds. of material have been dredged, a larger quantity than in any year for a period of 40 years. A complete set of new soundings had been taken, and the Commission had the satisfaction of knowing that the river had never been in a better condition, and was ready to meet any calls made upon it. The attention which the Commission had been paying to the river was yielding splendid results. The Commissioners decided to continue the reduction in the dues on small outward cargoes, which was instituted a year ago, experience proving that the river was getting trade which otherwise might have been lost."

River Wear Topics.

Mr. J. E. Dawson, chairman of the River Wear Commission, at the meeting in February, referred to the fact that the Commissioners were opposing the Sunderland Corporation Bill, and said there was no feeling in the matter so far as the Commissioners were concerned, and the presentation of their petition against the Bill must not in any way be taken as an unfriendly act. The Corporation had been asked, he said, to insert a saving clause to protect the interests of the Commissioners, but, unfortunately, had declined the request and, in the circumstances, the Commissioners had no alternative but to proceed with their objections. The Commissioners were the trustees of the port, and had been vested by Parliament with certain powers and privileges which would be seriously curtailed and the undertaking prejudicially affected if the Bill were passed in its present form.

The Wear trade figures for January show a small falling off in coal and coke shipments, compared with the previous year. The shipments were 382,661 tons, which was 20,893 tons less tons in 1934; on the other hand, the imports at 20,875 tons compared with 18,231 tons in 1934.

Hull and the East Coast

Trent Falls Improvement Works nearing Completion.

IN his latest report on the position of the work on the Trent Falls Improvement at the confluence of the Ouse and the Trent, where they join and form the Humber, Mr. Arthur E. Butterfield, engineer to the Humber Conservancy Commissioners, stated that the whole of the wall in the River Ouse, with the exception of a length of some 200 yards, had been completed on December 31st, and that only a few feet required to be added to the length of 200 yards to complete this. The apex was completed for a length of 150 yards in the Ouse and 300 yards in the Trent and the middle portion of the Trent Training Wall, 835 yards long, had been constructed to half the height, the remainder of the wall having been completed to finished level. Mr. Butterfield's report went on to state that " during the past year little alteration has taken place in either the River Ouse or the River Trent and that portion of the Humber between Trent Falls and Walker Dyke, except respecting the average cross-section of the River Trent, which is considerably reduced, but which is still much greater than before the works were commenced. The reduction in the average sectional area of the River Trent is due to the filling-in of various deep holes which existed and which are undesirable. Since the commencement of the work the average width of the low-water channel in the River Ouse has increased by 50 per cent., and the governing depth by 25 per cent. The width of the low-water channel in the River Trent has also increased by some 50 per cent., but the governing depth has decreased some 20 per cent., being now only 4 ft., as compared with 5 ft. in 1928. Owing to the shoaling of the deep holes which existed, the bed of the River Trent is now becoming more regular, and the swirls and eddies which have been so troublesome during the construction of the work are now being considerably reduced."

From the foregoing, it will be gathered that the Trent Falls Improvement Works are near completion. The scheme, which has been undertaken by the Aire and Calder Navigation with a view to the improvement of the Upper Humber and access to the West Riding Port of Goole, has cost over £600,000, towards which the Humber Conservancy Commissioners have contributed £116,000 in respect to that part within their jurisdiction. The works consist of two training walls at the confluence of the Rivers Trent and Ouse where they join to form the Humber, the broad object being to make the two rivers discharge their waters into the Humber at such an angle as to form one channel, and at the same time to deepen low-water access up the Ouse to Goole and improve the channel of the Trent. Considerably over half a million tons of stone has been used in the construction of the training walls, which constitute one of the largest undertakings of its kind ever carried out in this country. The wall in the Trent, which is 2,203 yards in length, was begun at the upper end in January, 1929, and the first pile for the Humber wall, which is 725 yards long, driven in January, 1931. When the skeleton wall had reached the apex the construction of the Trent wall from this point was put in hand and a junction made with the upper portion. The method employed, during the later construction of the walls, was to deposit chalk on the river bed to form a mattress for the wall. This mattress, approximately 6 ft. thick and 90 ft. wide, was deposited in advance of the piles to level up the irregularities and consolidate the river bed. Guide piles were then driven through the mattress and the wall between the piles brought up in steps. These guide piles for marking the line of the wall were placed 75 ft. apart, and the material used chalk-stone, with a covering of slag or hard lime-stone. The work has been carried on continuously, since 1929, in all kinds of weather and in the face of numerous difficulties. Strong tides on more than one occasion scoured out the foundations to a depth of 50 ft., causing sections of a wall to collapse, and only as recently as last winter deep scouring occurred immediately behind the apex, which was remedied by the sinking of nine barges, each containing 40 tons of stone, and the deposit of a thousand tons of stone to consolidate the foundations. Silting in the rear of the walls has been going on for some time, and it is estimated that 490 acres of foreshore and river bed will have been reclaimed when the work is completed. The benefit of the works, which have become known as " the fish tail," has already been felt. At the entrance to the River Trent there is now a minimum depth at low water of some 6 ft., as compared with 15 in. to 18 in. before the training walls were commenced. There has also been a marked improvement in the depth and regulation of the Ouse Channel from Blacktoft down to the junction of the Humber and Trent walls. It is interesting to add that the works form part of a general design for the improvement of the Humber navigation, recommended by Sir William Matthews, Mr. Anthony G. Lyster and Sir John P. Griffith, in a joint report to the Humber Conservancy Board, dated June 17th, 1913, in which they stated that the training of the Rivers Ouse and Trent into one united channel under all conditions of the rivers formed the key to all permanent improvement of the Upper Humber. The works have been carried out under the direction of Mr. G. R. Fenton, A.M. Inst. C.E., Engineer to the Aire and Calder Navigation, the Consulting Engineers being Messrs. Coode, Wilson, Mitchell and Vaughan-Lee, 9, Victoria Street, S.W., of which firm the late Sir William Matthews was a member.

Meeting of Humber Conservancy Commissioners.

A question relating to the provision of ballast for sailing vessels frequenting the Humber was raised at the meeting of the Humber Conservancy Commissioners, when it was reported that the only ballast lighter remaining on the Board's register had been sold by its owner. The Pilotage Committee had decided ta take no action in the matter, but when it came before the full meeting of the Commissioners it was referred back for further consideration. Sir James Bell, who moved the amendment, stated that last year three large sailing ships came to Hull from Australia, and after the discharge of cargo took in ballast, in all, 2,500 tons. He pointed out that if a sailing vessel took in anything but clean sand as ballast she would be fined, and that if it could not be obtained as usual, such ships would not come to Hull. Sometimes the vessels paid £100 for towage from Dover and £75 outward, and also spent money on repairs while at Hull. It was, therefore, most important that arrangements should continue to supply sand ballast when required.

The Humber Conservancy Board have decided to adopt dissolved acetylene gas as the illuminant for all their lighted floating marks and for all their unattended shore lights. The estimated cost of the conversion is £7,200.

Proposed Dredging of Scarborough Harbour.

The Scarborough Harbour Commissioners have under consideration a proposal to dredge the harbour at an estimated cost of £3,500. It was stated, at a meeting of the Finance Committee of the Scarborough Corporation, that the Commissioners were of the opinion that a part of the harbour might be usefully filled-in, but before coming to a decision a conference with the Corporation representatives is to take place. What apparently is in mind is the widening of the roadway on the land side of the harbour, which would necessitate a strip of the water space being filled in, for which purpose the material dredged would be used. At present the Commissioners are dependent for a part of their income upon the rents received from amusement caterers who are accommodated on the piers, and it is admitted cause an obstruction to the ordinary commercial traffic. A certain area taken from the harbour and filled in, if the shipping interests are willing, would provide sites for these people and greatly facilitate the conduct of ordinary business on the quays.

Deep Waterway between Berlin and Hamburg.

An important scheme in German inland waterway transport is soon about to be completed. In 1922 the deepening of the Elde, in order to render it navigable, was undertaken, and when the work is finished in the current year, the Elde will be the fastest and best connection by water between Berlin and Hamburg. The new waterway is fed from the Muritzsee, the Plauer See and the Schweriner See, and there is consequently no question of any difficulty of maintaining the water level. A depth of 1.45 metres and a width of 22 metres have been secured, and this will enable 600-ton lighters to pass between Hamburg and Berlin. The cost of this Elde Deepening Scheme is estimated at about RM. 3 million.

Weser Inland Shipping in January, 1935.

Following on the long low-water period last year in January, a water level was reached on several days, due to rainfall and thaw, enabling barges to be fully loaded. This occurred at two different periods, namely, from the 2nd to the 9th and the 27th to the 29th on the Upper Weser, and on the Middle Weser from the 4th to the 11th and from the 26th to the 31st January, 1935.

In spite of the improvement in the water level, development of goods traffic in January was rather less favourable than that of the previous month. Altogether, 143,700 tons passed through the Bremen Weser lock, compared with 147,500 tons in the previous month, a decrease of 3,800 tons, or 2½ per cent. Downstream traffic showed a decrease at 99,300 tons, of 2,900 tons. Upstream traffic decreased at 44,500 tons by 900 tons. The decrease of coal transport in downstream traffic is the result of the exceptionally heavy canal dues for bunker coal.

XUM

PORT OF MARSEILLES.

UNDER THE JURISDICTION OF THE MINISTRY OF PUBLIC WORKS, PARIS.

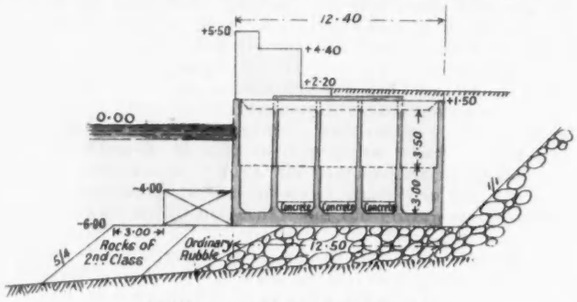
Scale for Plan.

M. 100 0 100 200 300 400 500 1000 1500 2000 M.

Scale for Sections

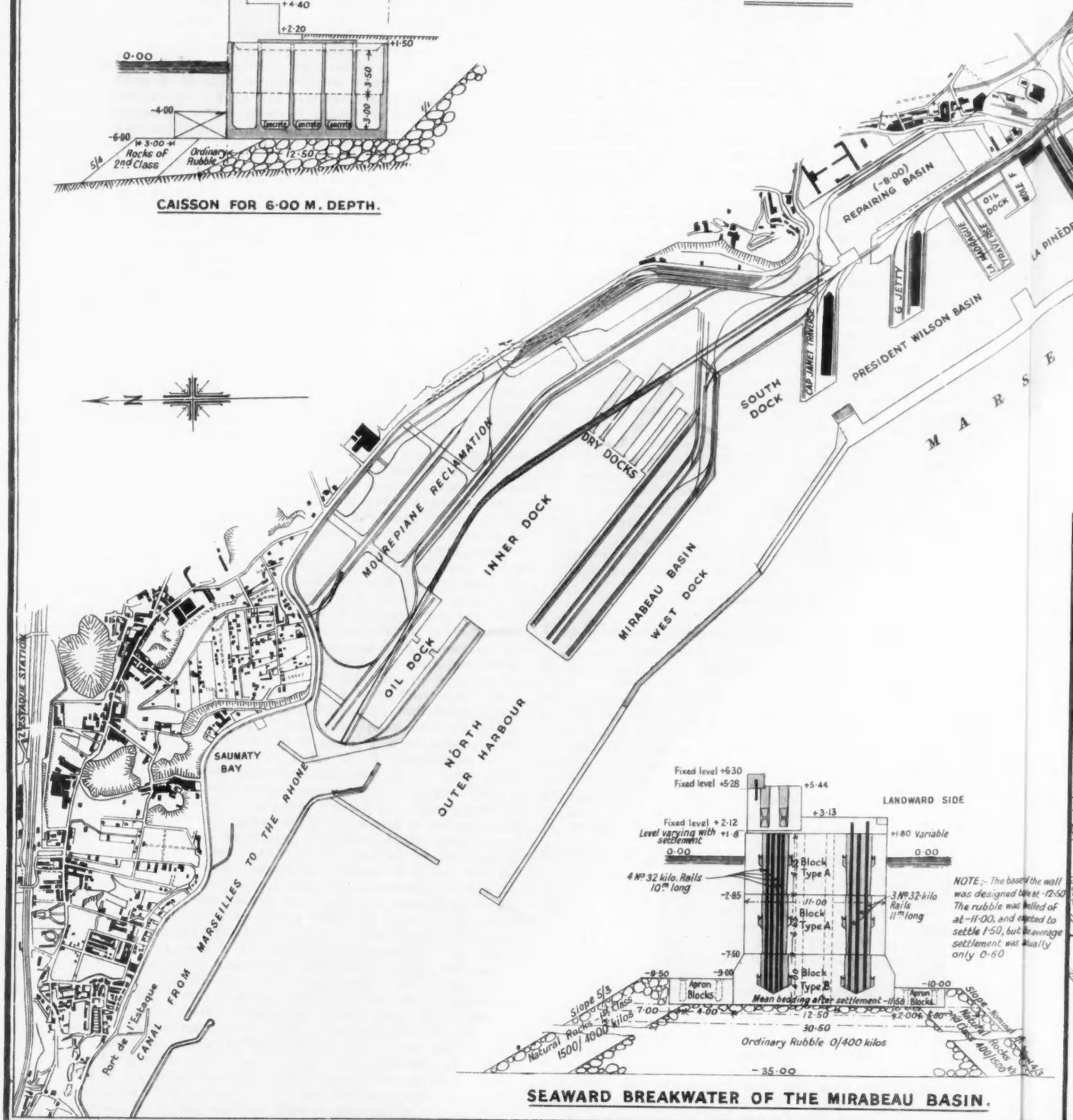
M. 0 1 2 3 4 5 10 15 20 M.

SECTION OF STE MARIE LIGHTHOUSE BREAKWATER.



CAISSON FOR 6·00 M. DEPTH.

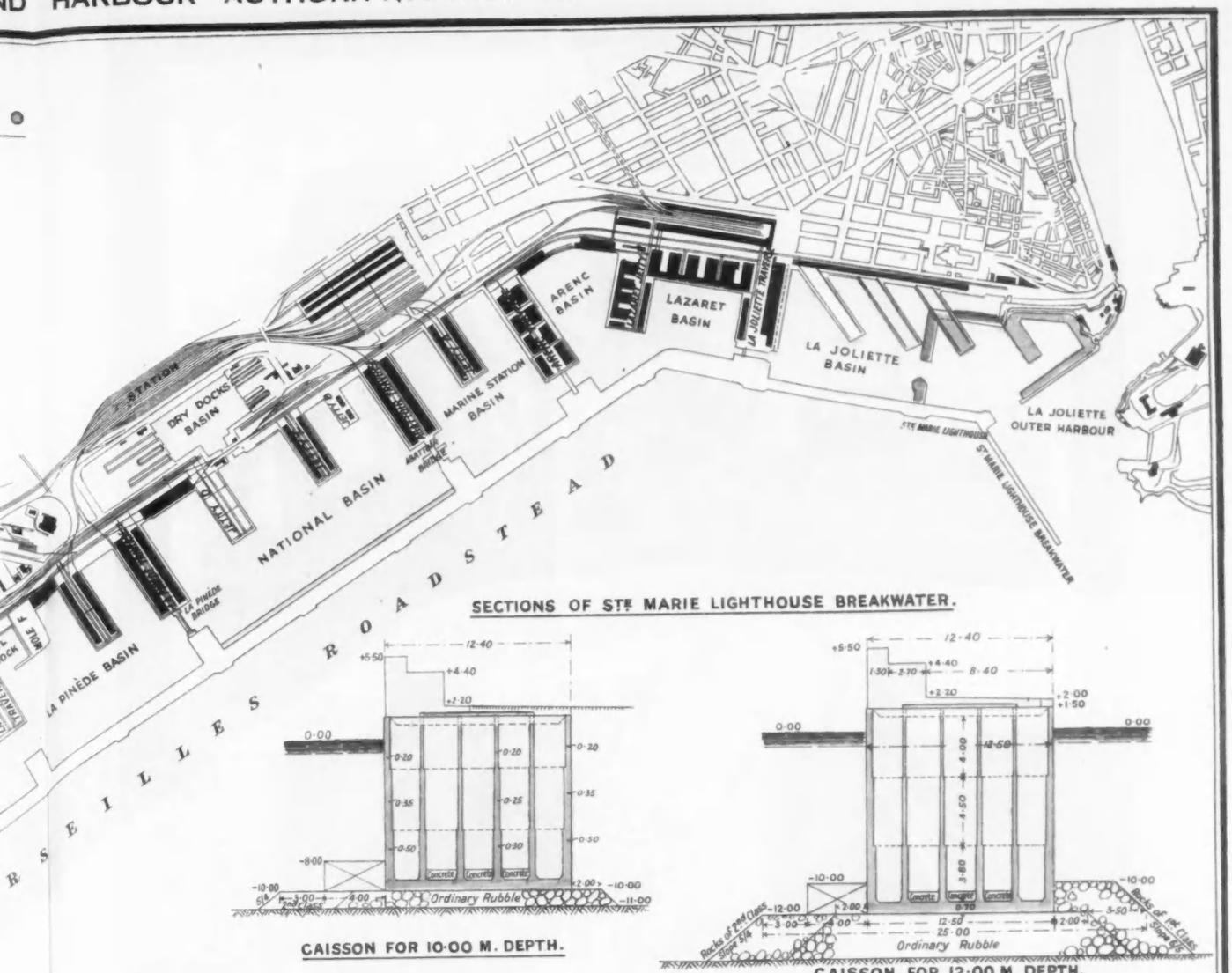
NOTE;- Works in Progress coloured RED
Works Proposed ,, PINK
Structures to be demolished ,, Dk BLUE.



NOTE;- The base of the wall was designed to be at -12·50. The rubble was tolled of at -11·00, and expected to settle 1·50, but the average settlement was actually only 0·60

SEAWARD BREAKWATER OF THE MIRABEAU BASIN.

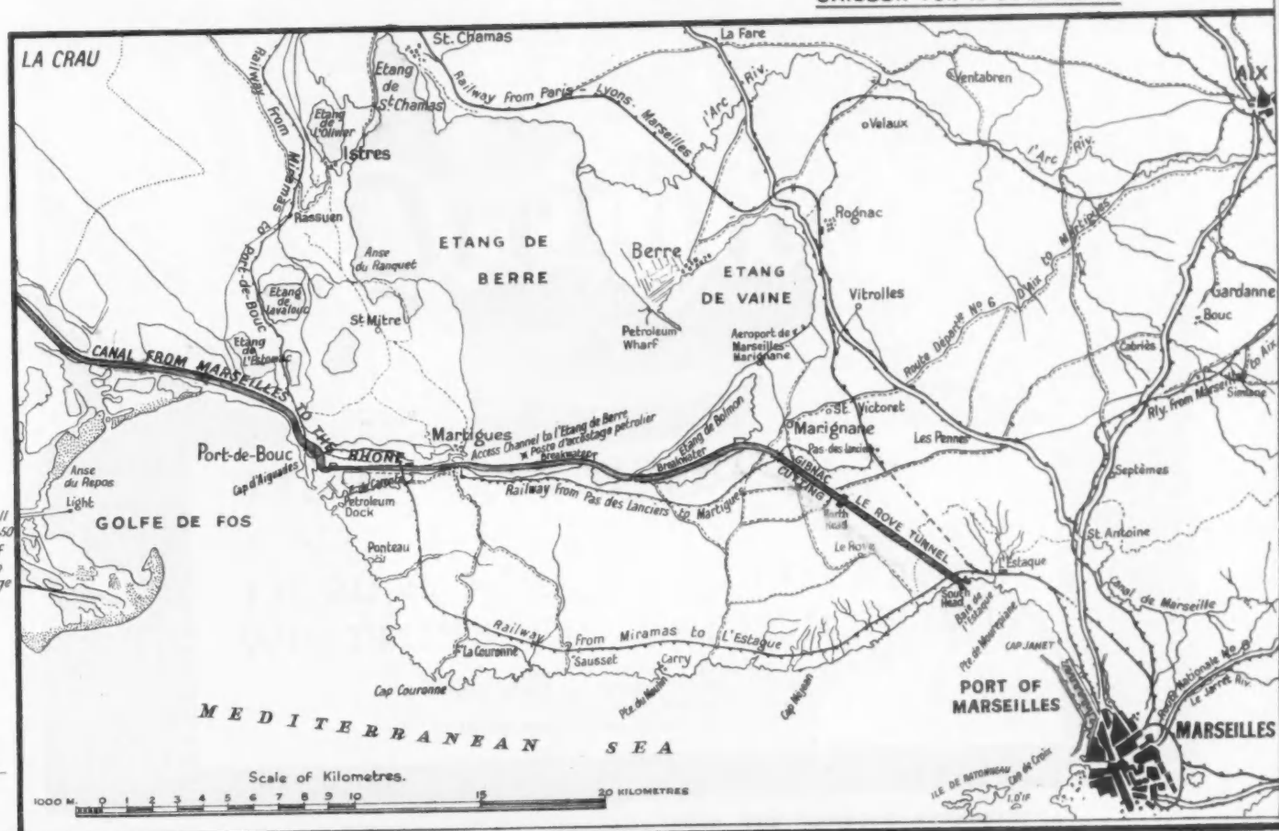
WARD & FOXLOW, LITHO



SECTIONS OF STE MARIE LIGHTHOUSE BREAKWATER.

CAISSON FOR 10·00 M. DEPTH.

CAISSON FOR 12·00 M. DEPTH.



E;- The base of the wall designed to be at -12·50 rubble was tolled of ·00, and carried to e 1·50, but the average ement was usually 0·60

W. LITHO. HARLEY ST. MARYLEBONE, W.

rch + Harbour Authority
April, 1935

TILBURY CONTRACTING
AND DREDGING Co. LTD
TILBURY HOUSE, PETTY FRANCE
WESTMINSTER, LONDON. S.W.1.

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WHEN REPLYING PLEASE MENTION "THE DOCK AND HARBOUR AUTHORITY."

The Port of Marseille its

Panoramic View of Marseil

THE Port of Marseilles with its "Annexes" comprises on the one hand the Port of Marseilles proper, and on the other hand the Port of Bouc-Martigues and the ports on the Etang (or lagoon) of Berre, which constitue the "Annexes." The whole group of ports is under the control of an engineer-in-chief of the Public Works Department, who is Port Manager.

The Port of Marseilles in its general features greatly resembles that of Liverpool, and consists of a series of docks formed in succession from South to North, having jetties at right angles with the main bank, except in the latest dock, named the "President Wilson Dock," whose jetties are inclined at an angle of 45 degrees with the bank or main quay.

Most of the quays in the port have been provided by the State with financial assistance from the Marseilles Chamber of Commerce, the Chamber bearing 50 per cent. of the cost. The sheds on them and the cargo-handling plant have been installed by the Chamber of Commerce alone. But some of the port works have been constructed and equipped by a private company, the "Compagnie des Docks et Entrepots de Marseille" (the Marseilles Dock and Warehouse Company), which holds a concession for 99 years, at the end of which the whole installation will revert to the State.

In the subsidiary ports or "Annexes," as in Marseilles itself, part of the quayage has been provided by the State and the Chamber of Commerce in equal shares, and equipped with sheds and plant by the Chamber. Part of the Port of Bouc-Martigues is held under a concession by a private company, the "Etablissement Maritime de Caronte" (the Caronte Marine Works), under conditions similar to those governing the Marseilles Dock and Warehouse Company. In addition, a certain number of other companies have been authorised to set up private establishments, in the subsidiary ports, some of which are named hereunder:—

At Port-de-Bouc.

Petroleum: Société Générale des Huiles de Pétrole; Société de Raffinage des Huiles de Pétrole à Lavera.

Chemicals: Société Kuhlmann.

At Caronte.

Soap and Oil: Société Verminck.

At Berre (on the Etang de Berre).

Petroleum and Chemicals: Société des Produits Chimiques et Raffineries de Berre.

At La Mede.

Petroleum: Union des Pétroles de Martigues; Compagnie Française de Raffinage.

Moreover, the Port of Marseilles is concerned in the operation and improvement of the canal from Marseilles to the Rhone, an inland navigation which, leaving the Rhone at Arles, reaches the Etang de Berre at Bouc, skirts the side of this lake, and emerges at Marseilles after passing through the Nerthe range of hills by the Rove tunnel, which is more than seven kilometres (4½ miles) long and 22 metres (72 ft.) wide.

Traffic Returns

The four tabular statements (I and IV) on page 172 give statistics under the following heads:—

I.—Comparison of traffic in the Port of Marseilles alone for the year 1913 and the years 1929 to 1933 inclusive.
II.—Comparison of traffic in the "Annexes" or subsidiary ports for the years 1929 to 1933.
III.—Comparison of traffic in the combined group, Marseilles and "Annexes, for the years 1929 to 1933.
IV.—Comparison of inland navigation traffic handled at Marseilles for the years 1929 to 1933.

These tables call for the following remarks:—

I.—Regarding the Port of Marseilles:

The numbers of vessels and their registered tonnage have remained nearly sationary since 1931, and have not fallen much below the maximum reached in that year. The tonnage of goods is lower, by nearly a million tons, than the 1931 figure, and the number of passengers has dropped from more than 850,000 in 1931 to less than 670,000. On the other hand, it is interesting to note that, notwithstanding the prevailing economic depression, the inland navigation traffic has been on the increase continuously since 1929, and reached, in 1933, the quantity of 220,000 tons.

II.—Regarding the Annexes:

The registered tonnage and goods tonnage have steadily increased since 1929. In particular, the goods traffic has risen from 1,200,000 tons in 1929 to more than 1,800,000 tons in 1933.

The "Annexes" of the Port of Marseilles tend more and more to attract the coal and oil traffic—nearly 650,000 tons of petroleum alone were imported in 1933—and generally to cater for such industrial installations as are unable to find in Marseilles itself the space necessary for their development.

its "Annexes" in 1934

View of Marseilles about 1925.

III.—Regarding the Port of Marseilles and its Annexes, as a Group:

The numbers and the registered tonnage of vessels are practically stationary and equal to the highest figures hitherto recorded. The goods tonnage has decreased by about 600,000 tons below the maximum of 8,700,000 tons in 1930, but this is a reduction of less than 7 per cent. The number of passengers has fallen from a maximum of 850,000 in 1931 to less than 670,000 in 1933, which represents a loss of about 21 per cent.

Improvements and Extensions in Progress or Proposed

The programme of extension and modernisation of the Port of Marseilles was described in this journal several years ago*. The present article will record the progress that has been made and the changes effected in the original programme, both at Marseilles itself and at the subsidiary ports.

Alteration of the Joliette Basin.

Before the works began, the Joliette Basin comprised a rectangular sheet of water, measuring 500 metres in length, from North to South, by 400 metres in width from East to West, surrounded by quay walls founded at a depth of 5 metres below datum upon mounds of rubble stone. In the basin the depth of water varied between 8 and 9 metres (26¼ to 29½ ft.). Vessels were moored stern-on to the quay, and cargo was discharged by lighters, which entailed very heavy handling charges. Moreover, trains could not reach the quay, and passengers had to cross Marseilles to get from the boat to the station, or vice-versa.

The re-modelling in progress, as shown on the Supplement, consists essentially in the following works:—

(a) Construction of two breakwaters or jetties: one running from Fort St. John in the direction of St. Mary's lighthouse, the other running out from St. Mary's lighthouse and at right angles with the first. These form the new Outer Harbour.
(b) Extension of the Basin towards the South.
(c) Construction of three oblique jetties or moles, having their root or base at the main bank or quay, and of a fourth smaller jetty, based on the protecting bank of an inner dock, and connected with the shore by a bascule bridge.
(d) Provision of sheds and equipment, also railway lines, on all these jetties.

The total cost will be about 200 million francs, equivalent to £1,600,000 at par, or £2,750,000 at present exchange.

At the present time the new outer breakwaters or protecting jetties are completed: the North mole or cargo jetty is nearing completion, and the substructure of the South cargo-jetty is in hand.

Some details are given below regarding points of interest in the construction of the outer jetties and the arrangement of the North cargo-jetty.

Outer Jetties.

These jetties or breakwaters are of the vertical-face type. They have a foundation of rubble stone, tipped in bank, levelled off at levels varying according to depth of water. Upon this rises the vertical wall, formed of concrete caissons lightly reinforced in the base and the upper part. These caissons are built in the dry in a dry-dock set apart for the purpose. They are floated out into place, sunk in their final position and subsequently filled, partly with concrete and partly with small stone. The caissons measure 12½ by 7½ metres, or 41 by 24½ ft. The longer dimension is lengthwise of the jetty. They are connected together at the top by a mass concrete wall, brought up to the level of + 4 metres. (See the cross-section of the St. Mary Jetty on the Supplement.)

Arrangement of the North Jetty (see the cross-section of this jetty, Fig. 1).

The North-side quay will have a length of 300 metres (984 ft.) and the South-side quay 250 metres (820 ft.) with a width of 62 metres (203 ft.) from North to South. These quay-walls are formed of concrete caissons, lightly reinforced in the base and the upper part, 12½ metres (41 ft.) long and 5½ metres (18 ft.) wide. The caissons are built in the dry in the same dry-dock as those for the outer jetties, and are floated into position.

Upon this jetty a three-storey shed, about 35 metres (115 ft.) wide, is being erected. On either side of the shed, between it and the cope line, are laid two quay-side railway tracks with space reserved for a third line eventually. The shed is to be equipped, later on, with semi-portal cranes of 3—5-ton capacity, and there is to be communication from floor to floor by cargo and passenger lifts, and by endless-chain conveyors for handling early produce from Algeria. The shed is to be employed in this way: The ground floor will receive miscellaneous cargo, both import and export. The first floor will form the marine station proper, and be reserved for passenger

* "The Dock and Harbour Authority," May, 1928.

Port of Marseilles—continued

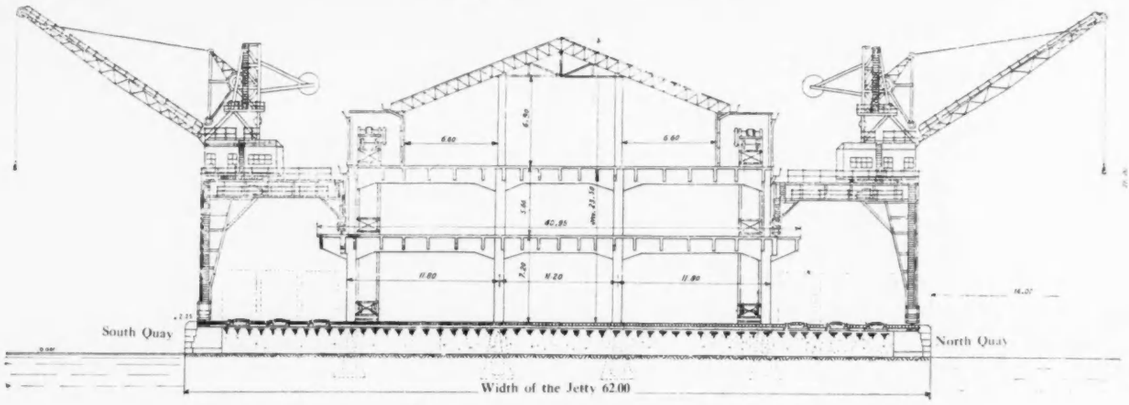
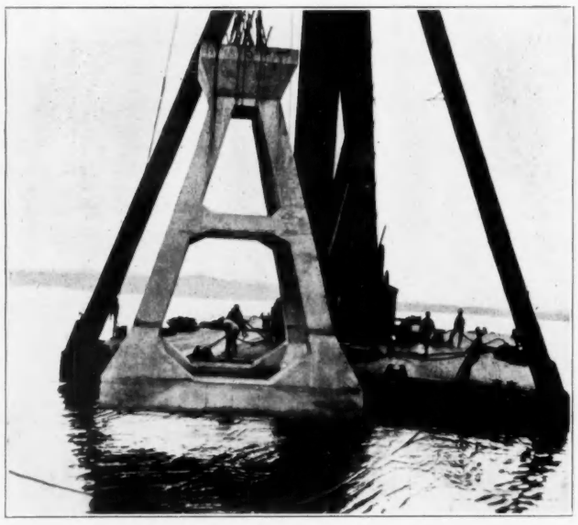


Fig. 1. Transverse Section of the North Jetty in the La Joliette Basin.

traffic. The second floor will be entirely devoted to the early Algerian produce, which needs extensive accommodation under cover. Boats from Algeria frequently bring in consignments of from 35 to 40,000 packages of produce, of a unit weight of about 25 kilos (½ cwt.), whose final destination is only decided upon after arrival at Marseilles, according to the state of the market in the large centres of consumption. This necessitates, after goods are loaded, the sorting of packages into lots—a process which calls for a good deal of space. The early produce will then be lowered to the ground floor for despatch by rail or road.

The works of construction and equipment at the North Jetty have been carried out with unusual speed, since the first stone of the quay-walls was laid on the 23rd September, 1932, and by the 15th June the mail steamer, "Timgad," of the Transatlantic Company's Algerian service, was able to berth at the quay, where it was awaited by the first boat-train making connection with Paris. This rapidity of execution has been rendered possible by a novel method, enabling the shed to be erected before the body of the jetty was reclaimed by deposit of filling: the shed is carried on reinforced concrete trestles, formed with four legs joined by slabs at top and bottom and braced in between. These trestles, whose weight is between 60 and 70 tons, are set by floating sheerlegs upon foundations of concrete poured under water. (See view No. 1 and cross-section in Fig. 1.) The tops of these trestles are then connected by reinforced concrete lacing beams, precast and placed by the sheerlegs, and the shed stanchions are erected upon the trestles. Thus the shed can be built over the water, without having to await the deposit of the filling.



View No. 1. March 8th, 1933. Placing a Foundation Trestle for the Shed on the North Jetty in La Joliette Basin.

The works of construction of the outer jetties, the inner (North) jetty and the shed upon it, have been carried out by Messrs. Leon Chagnaud and Son, Limited.

Construction of the Mirabeau Basin.

The lay-out described in our former article* has been modified. The amended project, as shown on Supplement, now comprises:—

(a) Construction of two outer breakwaters, leaving a passage 200 metres (656 ft.) wide between them.

(b) Construction of the South Dock, having two berthing quays, 350 metres (1,150 ft.) and 375 metres (1,230 ft.) long respectively.

(c) Construction of a berthing jetty, 930 metres (3,050 ft.) long on the South quay, 750 metres (2,460 ft.) on the North quay, and 210 metres (690 ft.) wide, which will serve, eventually, as a station of call for liners.

(d) Construction of four dry-docks, one of which will be 375 metres (1,230 ft.) long.

(e) Formation of a new petroleum depot.

(f) Reclamation of land at Mourepiane, to be leased to the Marseilles Chamber of Commerce for the establishment of an industrial zone.

The whole of these works will cost about a milliard (1,000,000,000) francs, equivalent to about £8,000,000 at par, or £14,000,000 at present rate of exchange. The state of progress reached in 1934 is as follows:—

The outer or seaward breakwater is completed for a length of 1,350 metres (4,425 ft.) from the Cap Janet crossing. The quays of the South Dock are built, and the reclamation behind them is begun.

The outer breakwater was at first constructed to a section with sloping banks, after the pattern of the earlier breakwaters in the port. For the last 650 metres, however, it is of the vertical type, comprising a rubble mound foundation, levelled off at a depth of 12 metres, upon which the vertical wall is bedded. This walling was at first formed of 350-ton concrete blocks or monoliths, but the weight of these was subsequently increased to 450 tons. In this later part, there are three tiers of blocks, 12½ metres wide, set in place by the floating sheerlegs. (See Supplement.)

La Joliette Basin. Aerial view taken about 1925 before the commencement of the works described.

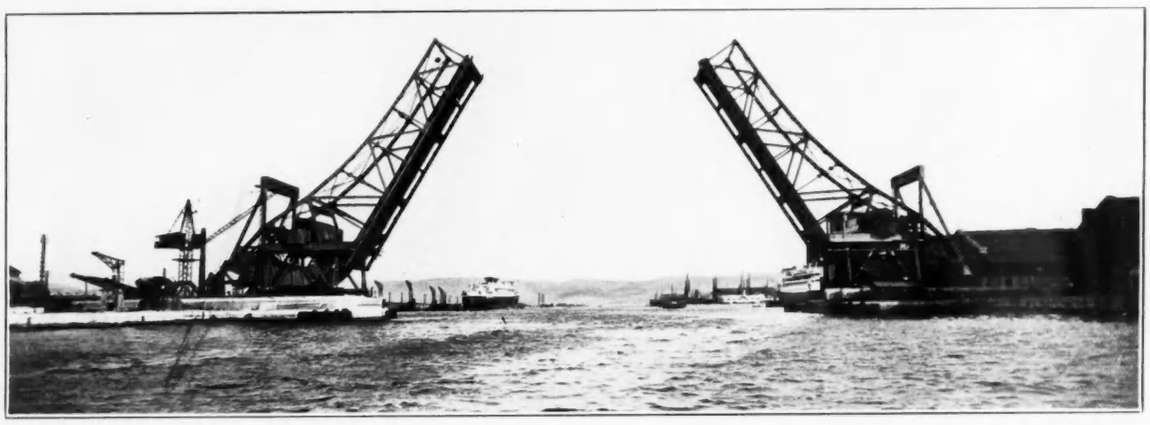
* "The Dock and Harbour Authority," May, 1928.

Port of Marseilles

Aerial View of Port de Bouc.

Aerial View of Martigues and the Entrance from the Etang de Caronte to the Etang de Berre.

Port of Marseilles—continued



The Rolling-lift Bridge at La Pinede Crossing.

The suspension gear is comprised of lewis rods, which are sunk into four wells formed in the blocks and which bear against shoulders formed in the internal cavities. The four vertical wells of each monolith, after they are set in place, are filled with concrete poured under water and reinforced with rails. The base of the block-walls is protected against erosion and settlement by artificial concrete blocks weighing 40 to 60 tons, 40 tons on the inner and 60 tons on the outer face. The separate monoliths are unified by a topping wall of concrete brought up to the level of 6 metres, reinforced with lengths of rail laid horizontally and inter-locking with the upper ends of the vertical rails that are embedded in the concrete filling of the lewis holes.

The works have been carried out in part by the Chagnaud Contracting Company, and in part by the Hydraulic Works Company.

Construction of the Pharo Basin.

In order that future basins might not be too far from the town—a factor of importance to travellers—it is intended, eventually, to extend the port by the formation of a basin, to be called the " Pharo Basin," to seaward of the Joliette Basin. The project received Government approval, as of public utility, by an Act of 10th April, 1932. It comprises the construction of an outer harbour, three jetties 140 metres (460 ft.) wide and from 400 to 600 metres (1,310 to 1,970 ft.) long, which will communicate directly with the shore by the Joliette crossing suitably altered. These arrangements will give 85 hectares (210 acres) of water area, in the outer harbour and the basin itself, and will endow the port with a new entrance jetty improving the situation. The estimated cost is 420 million francs (£6,000,000 at present rate); but the works are unlikely to be carried out for some time yet, since the Mirabeau Basin, already under construction, will satisfy requirements for many years to come.

Improvements at the Abattoir and Pinede Passages.

The Abattoir Passage really comprises two channels, each of 28 metres (92 ft.) clear opening, separated by an island structure and spanned by a swing bridge. These channels have the double fault that they are too narrow and that neither of them is in line with the Arenc Passage.

A scheme has been drawn up for the removal of the existing bridge and its replacement by a bascule bridge over a 70-metre (230 ft.) channel, but these changes cannot be effected until after a new connection has been made between the outer breakwater and the main shore by means of an opening bridge, now being constructed, over the Pinède Passage. This is to be a rolling-lift bridge of Scherzer type, with a span of 75 metres between abutments and a channel width of 70 metres (230 ft.) and is to carry a line of railway.

The foundation work has been done by the Hydraulic Works Company, and the steel superstructure by the Fives-Lille Company.

Improvements in Port Equipment

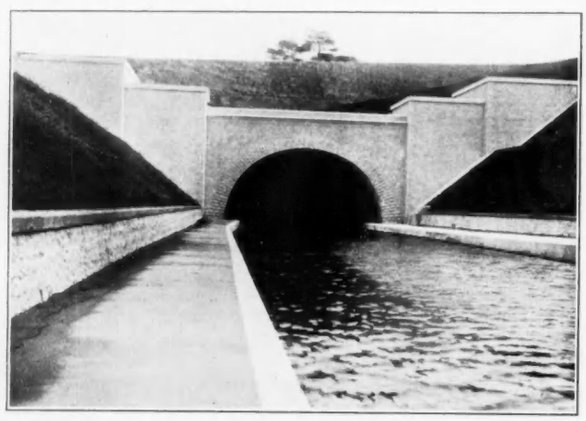
The Marseilles Chamber of Commerce has undertaken, during recent years, the equipment—with sheds and cargo-handling appliances—of the President Wilson Basin, completed up to quay level in 1924, and the modernisation of the handling appliances at other basins.

At the President Wilson Basin, the improvements have comprised the erection on G Jetty and the Cap Janet crossing of two double-storey sheds 300 metres long and 36 metres wide (984 ft. by 118 ft.). The upper storey has been treated like a railway station, with a steel-framed roof, but the floor is designed for a load of 2,500 kilograms per sq. metre (5 cwt. per sq. ft.). At the same time, the various quays of this Basin have been furnished with electric cranes. These cranes, 20 in number, are of 1½-ton and 3-ton capacity, with radius from 14 to 6 metres (45 to 20 ft.).

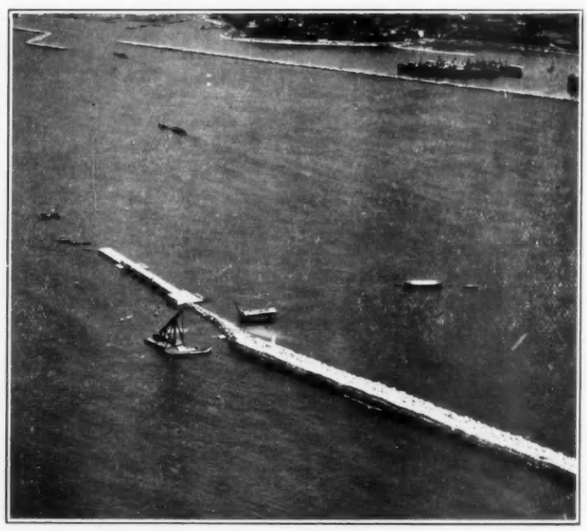
The Chamber of Commerce has also recently completed the erection of sheds and equipment in the National Basin. During 1932, there were brought into use a double-storey shed measuring 170 metres by 40 metres (560 by 130 ft.) on the quay near D Jetty and two smaller sheds on B Jetty, also four 3-ton electric grabbing cranes to serve the 170-metre shed.

In all, 39 electric cranes have recently been put into service on the various quays throughout the port, and a group of five sheds has been erected, covering an area of about 65,000 sq. metres, or 16 acres.

In addition to such improvements and additions of general utility, the Chamber has given attention to the improvement of



Canal from Marseilles to the Rhone. Northern end of the Rove Tunnel.



The Outer Breakwater of the Mirabeau Basin, at the point of junction between the Sloping-sided Dyke and the Vertical Wall.

Port of Marseilles

View of the Caronte Marine Quay and its Equipment. The Caronte Viaduct in the background.

Canal from Marseilles to the Rhone. Southern End of the Rove Tunnel.

Port of Marseilles—continued

special services, such as cranage for heavy loads, fire protection, bulk oil importation and the supply of fuel oil.

For heavy lifts the Chamber has purchased a self-propelling 150-ton floating crane with luffing and slewing jib.

Top—June 15th, 1933. Opening of the Marine Station at La Joliette by the steamer "Timgad."
Centre—June 7th, 1934. A Ship Berthing at the New Marine Station.
Bottom—June 14th, 1934. Progress of Works at the North Jetty in La Joliette Basin and the New Marine Station.

For fire-fighting, the already excellent equipment of the port has been augmented by the provision of a new fire-float capable of salvage service also. This is 35 metres (115 ft.) in length b.p., has a displacement of 450 tons, and a speed of 11 knots. It is driven by two Diesel engines, each of 500 b.h.p. and 500 r.p.m. coupled to 330-k.w. generators.. These sets supply direct current at 230 volts to the following machines:—

(a) Two motors of 400 h.p. and 275 r.p.m., driving the propellers.
(b) Three fire pumps coupled to electric motors, and each capable of delivering 400 cub. metres per hour at high pressure, or double that quantity at a lower pressure. The lower pressure is generally used.
(c) A suction pump, with electric motor, delivering 3,000 cub. metres per hour, and
(d) An air pump, with electric motor, delivering 720,000 litres per hour.

The fire pumps charge a main serving 50 hose hydrants and five monitor jets, one of which is mounted on a telescopic tower about 16 metres (52 ft.) high. The range of these monitors is about 70 metres (230 ft.). The fire-float "Alerte" is capable of taking a vessel in tow.

For the importation of petroleum in bulk, the Chamber of Commerce, after enlarging the oil dock to take tankers 180 metres (590 ft.) in length, has laid down several pipe-lines serving three reception points. An attempt has also been made, wherever possible, to provide fuel-oil bunkering connections, so placed that vessels can bunker while lying at their berths: four such connections have been provided at E Jetty. In addition, the pipe-line leading to the end of G Jetty is being duplicated for gas-oil and fuel-oil.

Proposed Extension and Improvements in the "Annexes" of the Port

The Passage at Port-de-Bouc leading to the entrance channel into the Etang de Berre, is being deepened to 9.6 metres (31½ ft.). The Caronte Marine Works Wharf is being lengthened by 200 metres, from 450 to 650 metres (1,475 to 2,130 ft.). Further dredging is intended, which will give the canal between Port-de-Bouc and Martigues a width of 50 metres (165 ft.) throughout its whole length: also further reclamation of land at the Etang de Caronte and elsewhere.

Eventually, as and when necessary, the canal between Bouc and Martigues is to be deepened to 9 metres (29½ ft.) and the Passage at Port-de-Bouc deepened from 9.6 metres to 12 metres (31½ to 39½ ft.). The basin at Port-de-Bouc is to be dredged to 10.5 metres (34½ ft.), further land reclaimed, the oil dock enlarged and a graving dock built.

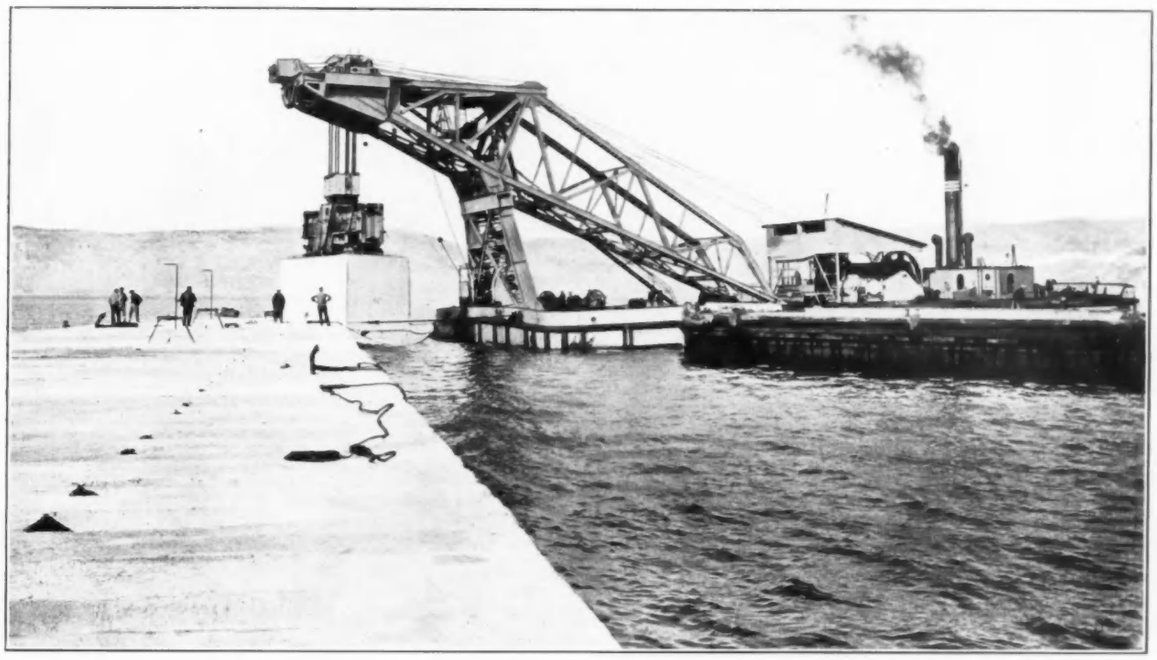
Future Possibilities

The works in progress and the proposed extensions will enable the Port of Marseilles and its "Annexes" to cater, when need arises, for a large increase of traffic. In particular, the proposals affecting the Etang de Berre alone represent an increase of 40 kilometres (25 miles) of quayage and 2,000 hectares (5,000 acres) of reclamation. The present economic conditions and the protectionist policy in vogue among most of the great maritime nations preclude any expectation of such increase of traffic in the near future; but the Port of Marseilles has not lost hope of regaining some of the lines of international trade which were deflected to the great ports of the North, such as Hamburg, Antwerp and Rotterdam especially. This is expected to result from the regulation of the Rhone, towards which the Chamber of Commerce has taken the first step in the formation of the Marseilles-Rhone Canal. The distance from Port Said to Strasburg, via Marseilles and the Rhone navigation (including locks), will be no more than 3,850 kilometres (2,390 miles), as compared with 6,792 kilometres (4,210 miles) via Gibraltar, Rotterdam and the Rhine.

Outer Breakwater of the Mirabeau Basin: Block-making Yard for 350-ton Blocks.

At the same time, the colonial trade of Marseilles has expanded appreciably since 1918, and this has enabled the port to maintain, notwithstanding the economic depression, a comparatively steady tonnage of goods handled, and one may hope that the growing prosperity of the French colonies, especially in North Africa, will rapidly increase this traffic.

Port of Marseilles

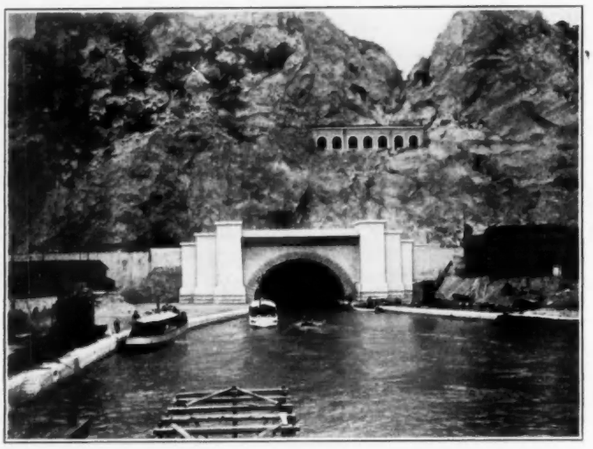


Outer Breakwater of the Mirabeau Basin: Deposition of a 450-ton Block.

Outer Breakwater of the Mirabeau Basin: Floating Sheer-legs Transporting a 350-ton Block.

Port of Marseilles—continued

In conclusion, it may be said that the "Annexes" of the port are likely to derive very considerable traffic from the industrial installations, such as chemical factories and petroleum refineries, which are being established on the margin of the Etang de Berre.



Canal from Marseilles to the Rhone. Southern end of the Rove Tunnel.

I.—Traffic in the Port of Marseilles alone in 1913 and from 1929 to 1933:—

INWARD AND OUTWARD COMBINED.

Years	No. of Ships	Registered Tons	Goods, Tons	No. of Passengers
1913	17,278	21,090,820	8,938,652	566,165
1929	15,519	28,823,576	7,350,885	810,404
1930	15,990	30,127,704	7,354,233	815,573
1931	15,669	30,335,845	7,208,214	850,789
1932	15,490	29,567,133	6,598,195	696,284
1933	15,836	29,669,203	6,275,054	668,296

II.—Traffic in the "Annexes" of Marseilles from 1929 to 1933:—

INWARD AND OUTWARD COMBINED.

Years	No. of Ships	Registered Tons	Goods, Tons	No. of Passengers
1929	1,071	1,261,813	1,209,913	31
1930	1,183	1,426,349	1,367,809	8
1931	1,209	1,533,358	1,303,588	2
1932	1,715	1,701,207	1,437,767	—
1933	1,657	2,033,159	1,841,960	5

III.—Traffic in the Port of Marseilles and its "Annexes" from 1929 to 1933:—

INWARD AND OUTWARD COMBINED.

Years	No. of Ships	Registered Tons	Goods, Tons	No. of Passengers
1929	16,590	30,085,389	8,560,798	810,435
1930	17,173	31,554,053	8,722,042	815,581
1931	16,878	31,869,203	8,511,802	850,791
1932	18,205	31,268,340	8,035,962	696,284
1933	17,493	31,702,362	8,117,014	668,301

IV.—Inland Navigation Traffic of the Port of Marseilles from 1929 to 1933:—

IMPORTS.

Years	No. of Barges	Tons of Goods
1929	691	137,479
1930	756	152,864
1931	817	177,251
1932	999	219,520
1933	1,283	222,417

Lloyd's Register Annual Summary of Mercantile Shipbuilding for the Year 1934

THE statistics issued by Lloyd's Register of Shipping of vessels launched during the year 1934 show a notable increase, both at home and abroad, in the output of the shipbuilding industry, the total being nearly double the unprecedentedly low figure for 1933.

Excluding ships of less than 100 tons gross, there were launched in the World 536 vessels of 967,419 tons gross, of which 459,877 tons were in Great Britain and Ireland, and 507,542 tons abroad. The output in Great Britain and Ireland represents 47.5 per cent. of the total, as compared with 27.2 per cent. in 1933, 25.8 per cent. in 1932, 31.1 per cent. for 1931, and 51.2 per cent. for 1930. The output of the other leading countries is as follows:—

Japan, 152,420 tons; Germany, 73,733 tons; Denmark, 61,729 tons; Sweden, 49,542 tons; Holland, 46,905 tons.

The net increase in the World output as compared with the extremely low total for 1933 amounts to no less than 478,403 tons (97.8 per cent.). In Great Britain and Ireland there has been an increase of 326,762 tons in the tonnage launched, while abroad the increase amounts to 151,641 tons.

In Great Britain and Ireland, 24 vessels, of 46,757 tons, were launched for owners residing abroad, equal to 10.2 per cent. of the total output. Fourteen of these vessels, of 26,516 tons, will be registered in the British Dominions overseas.

The World launches for the year include 58 vessels of over 6,000 tons each, of which 13 are of between 10,000 and 15,000 tons, and three of 15,000 tons and upwards. The quadruple-screw turbine express steamer "Queen Mary," built on the Clyde and named by Her Majesty, takes pride of place among the launches throughout the World during 1934, and other large vessels launched were:—

Twin-screw turbine s.s. "Orion," 24,000 tons, built in Great Britain and Ireland; twin-screw turbo-electric ship "Scharnhorst," 18,000 tons, built in Germany; twin-screw motorship "Pilsudski," 14,400 tons, built in Italy.

In addition, twelve motorships of between 10,000 and 11,000 tons, eight built in Great Britain and Ireland, and two each in Holland and Japan, were launched.

The total tonnage of steamers launched in the World is 391,176 tons, of which 269,277 tons (68.8 per cent.) were launched in Great Britain and Ireland, and 121,899 tons (31.2 per cent.) in countries abroad.

The total tonnage of motorships launched in the World is 563,601 tons. Of these, 188,934 tons (33.5 per cent.) were launched in Great Britain and Ireland, and 374,607 tons (66.5 per cent.) in countries abroad.

During the year, there were launched 17 vessels of about 170,000 tons which are to be fitted with steam turbines. These figures include one vessel of 18,000 tons, in which turbo-electric drive is employed; in the remainder the turbines are associated with reduction gearing. In addition, there were launched 27 vessels of about 38,000 tons with a combination of steam reciprocating engines and low pressure turbines. In Great Britain and Ireland, there were launched eight turbine vessels of 113,864 tons, and four vessels of 12,057 tons with a combination of steam reciprocating engines and low pressure turbines.

During the year, 31 oil tankers, of 198,337 tons—excluding vessels of less than 1,000 tons—were launched, of which ten of 69,066 tons were built in Great Britain and Ireland. Of the 31 tankers, 26 of 181,593 tons are motorships.

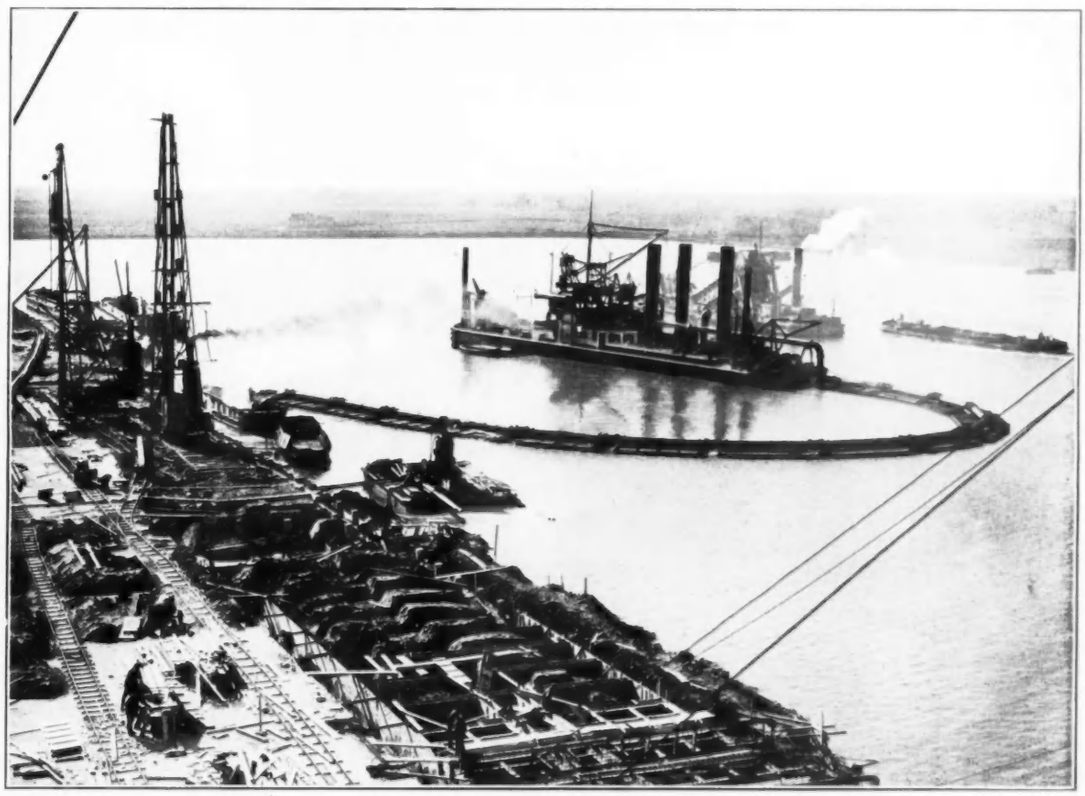
Of the steam tonnage launched in the World—391,176 tons—about 175,000 tons refer to steamers fitted to burn oil fuel under the boilers.

Lloyd's Register Quarterly Returns show that at the opening of the year 1934 the tonnage being built throughout the World was 757,277 tons. The large increase of 322,000 tons at the end of the March quarter was followed by further advances in June and September. At the end of December the total was 1,251,722 tons, showing an increase of 494,445 tons, as compared with December, 1933. The figures for Great Britain and Ireland for the same dates show an increase of 265,293 tons at December, 1934.

At the beginning of 1935, four countries had more than 100,000 tons of shipping under construction, viz.: Great Britain and Ireland, 596,834 tons; Germany, 139,611 tons; France, 120,952 tons, and Japan, 104,640 tons. Next in order were: Denmark, 78,630 tons; Sweden, 60,140 tons; Holland, 48,333 tons, and Italy, 37,000 tons.

In view of the present figures of tonnage under construction, and taking into account the fact that the amount of tonnage laid down during 1934, as shown in Lloyd's Register Quarterly Returns, has exceeded by 227,000 tons the tonnage launched during the year, the position of the shipbuilding industry throughout the World reveals a gradual renewal of activity.

WESTMINSTER DREDGING COMPANY LTD.



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WHEN REPLYING PLEASE MENTION "THE DOCK AND HARBOUR AUTHORITY."

Notes from the North

Manx Harbour Works.

WORK is progressing rapidly along the south side of the Red Pier, Douglas, I.O.M., and the viaduct is to be completed on or before the end of June. The new northern berth, with the viaduct as the means of approach to it, will be available for excursion traffic on busy days next summer. It is not intended, except in emergency, to use the southern berth, as that would impede the remainder of the work. A formal opening of the entire pier is planned for May, 1936.

Dock Railway.

A suggestion has been submitted to the Transport Committee of the Liverpool Chamber of Commerce that it would assist the railway working along the docks if the speed limit of four miles per hour were abolished. The Mersey Docks and Harbour Board comments that the general opinion is that it would be very unsafe to extend these speed limits owing to the amount of traffic on the roadways, and the number of dock gates which are crossed by the main lines. The representative of the Railway Companies stated to the Committee that they were endeavouring to eliminate, as much as possible, trucks passing from North to South, and vice versa.

Retirement.

Mr. Alfred Tungate, chief inspector of Preston Dock, who has been associated with the undertaking for twenty-nine years, has retired. Previously, Mr. Tungate worked at the Hull Dock undertaking for twenty-five years. On relinquishing office, tribute to Mr. Tungate's work was paid by Mr. J. G. Merriweather, general superintendent and traffic manager, who presented him with gifts.

Dock Charges.

Liverpool Steamship Owners' Association, in their annual report, comment on the accounts of the Mersey Docks and Harbour Board. It is stated that the Board's costs of "general charges" have increased each year over the last five years, during which similar expenses on the part of commercial undertakings have of necessity been drastically cut down. Concessions with regard to dues on ships are long overdue.

Birkenhead wants a Fish Dock.

Mr. Martin Pyke drew attention at the Birkenhead Chamber of Commerce to the Liverpool plan for the conversion of Canning Dock into a fish dock and market.

He suggested that, in view of the proposal to provide fishing port facilities at Liverpool, the Birkenhead Chamber should re-open the discussion with regard to the establishment of a fishing port at Birkenhead. Birkenhead enjoyed facilities which Liverpool did not enjoy. For one thing, Birkenhead docks could be entered during 22 hours out of 24. In addition, there were sheds available at the Birkenhead docks and four railway stations within a few hundred yards. Fresh fish could be delivered from Birkenhead to the Midlands in time for lunch every day.

Birkenhead's facilities were unrivalled by any fish market in the country. There was a large shed where three boats could discharge simultaneously. There was a large salt stores in Birkenhead, and also an ice factory capable of extension. Vessels could go from one section of the docks to another discharging cargo, taking on ice and salt and making a rapid turn round.

Mr. T. W. H. Humphreys replied that Birkenhead was at a disadvantage inasmuch as Liverpool already had a wholesale fish market, which the Corporation was anxious to transfer to a new site. The Liverpool market was an entirely different thing from that visualised by Mr. Pyke. Seventy per cent. of the fish that came into Liverpool for wholesale was brought in by rail, and was for local trade. Birkenhead could not hope to get that trade. When the question of providing trawler facilities at Birkenhead was last discussed, it was discovered that one stumbling block was that to convert the vacant docks, so that they would be adapted to the fish trade and attract the Fleetwood trawlers, would entail the spending of a vast sum of money. There was no guarantee that even after this sum had been spent—and a minimum of £60,000 or £70,000 was estimated—any substantial proportion of the Fleetwood fish trade would be attracted to Birkenhead. To be adapted to the fish trade, it would be necessary to provide such facilities that trawlers would be able to discharge fish, take in salt, and undergo running repairs in sufficient time to depart on the same tide.

Liverpool could set up at the Canning Dock a market both for the fish arriving by rail and that which came by sea. Birkenhead could only hope to get the sea trade.

Uniformity Wanted.

A proposal to establish uniform haulage charges on the Mersey Dock Estate is engaging the attention of the railway companies and the Mersey Docks and Harbour Board. Comparisons have been made with regard to the charges on the two sides of the water (Liverpool and Birkenhead), but really the charges are not comparable, as the services are not the same.

The chief difficulty seems to arise from the fact that steamers for the same ports load on each side of the river. This causes confusion in the minds of the exporters. Again, when cargo intended for one vessel is unavoidably shut out from one ship and it has to be transhipped across the Mersey to another vessel going to the same port, the question of the payment for transhipment arises. These and other matters are under consideration.

Ship Canal Traffic.

Manchester Ship Canal Company reports that traffic receipts for the month of February were below those for the corresponding month of the previous year. Receipts were only £79,393, against £102,205 in January and £81,094 in February last year. For the first two months of the year the receipts were £181,689, or £305 more than in the corresponding period of 1934, and £7,852 more than in that of 1933.

Mersey Tunnel Work.

Sir Basil Mott, engineer-in-chief to the Mersey Tunnel Joint Committee, reports that the work on the tunnel is now nearing completion, and that the total value of the engineering work to date is £5,075,483. Permanent control of the tunnel from the Pierhead Station has just been put into operation. The installation of plant in the various ventilation buildings is complete, with the exception of Woodside, where the initial ventilation scheme is complete and the permanent plant awaits the completion of the building. Fifty-five men are now employed on the five uncompleted contracts.

New Pontoons.

Seven new pontoons, weighing close on 70 tons, were towed from Chepstow to Menai Bridge a few days ago. They are being used to support the structure of the Menai Bridge landing stage. The pontoons are 20 ft. long by 14 ft. broad and 5 ft. 6 ins. deep. They each weigh 9½ tons, and have a draught of 16 ins. The length of the tow was 1,000 ft., and between each pontoon there was a space of 90 ft. Each was connected by two wires to the corners. The tugs entered the Menai Straits by the Puffin Island entrance, and the pontoons were placed in position alongside the pier. The old pontoons have been removed and the new ones substituted. On them will be placed a deck which is to be higher than the present one, and this will facilitate the landing of the passengers.

Isle of Man Harbour Board.

Changes are pending in the higher executive personnel of the Isle of Man Harbour Board owing to the retirement, on 30th September, of:—Mr. W. H. Blaker, M.I.C.E., chief harbour engineer; Capt. J. T. Callow, harbourmaster at Ramsey; Mr. J. C. Duggan, assistant-harbourmaster at Ramsey; Capt. J. Kinley, harbourmaster at Peel; Mr. T. Kewish, harbourmaster at Castletown.

Mr. Blaker came to the Isle of Man in 1896, under Mr. Percy Nevill, Assoc. M. Inst. C.E., who was then chief assistant under Mr. James Walker, M. Inst. C.E., chief engineer to the Harbour Board. In 1897 he was appointed resident engineer on the Queen's Pier extensions at Ramsey. In the following year he became chief assistant to Mr. Nevill. In 1900 he was appointed chief assistant engineer on the staff of Sir John Jackson, Ltd., and was one of the first three members of the company's staff to commence work on a new naval dockyard at Simonstown, a £4,500,000 contract. In 1904 he became assistant engineer-in-charge of the Congella development scheme at Durban, under the Natal Harbour Board. In 1906, while Mr. Blaker was at Durban, he was appointed chief engineer to the Isle of Man Harbour Commissioners. One of his first duties was the propounding of a scheme for the improvement of Douglas Harbour, and in 1907 he submitted the Red Pier extension scheme. After 23 years, he had the satisfaction of seeing his proposals put into effect almost exactly on the lines of his own scheme, despite many other counter designs which had been suggested. Amongst the many important Island works which he has designed and carried out are:—The Raglan Pier, Port Erin; re-construction and widening of the roadways on the Douglas, Ramsey, Peel and Castletown quays; re-building quay walls at Ramsey, Peel, and Laxey, and dredging of Peel Harbour.

Notes from the North—continued

Capt. John Thomas Callow has been, for 36 years, in the employ of the Isle of Man Harbour Board at Ramsey. He was appointed assistant harbourmaster in 1898, and harbourmaster in 1923, succeeding Harbourmaster John Clarke.

Whitehaven Dock.

Whitehaven Harbour Improvement Committee has turned down the offer made by Mr. Malcolm Stewart, Commissioner for Special Areas, of a grant of £15,000 and a loan of £85,000 at 3½ per cent. interest for the purpose of improving the Whitehaven Dock.

The letter by Whitehaven Harbour Improvement Committee to Mr. Malcolm Stewart, rejecting the offer, states:—

"The Committee much regret that the terms are of such a nature as to be unacceptable by the Harbour Commissioners for the following reasons:—

"(a) The extreme improbability of the consent of the bondholders to a scheme which wipes out the possibility of the payment of any interest for many years to come to holders of Class B, C and D bonds, which amount in the aggregate to £159,153. The bondholders have already been subjected by statute to severe reductions in the rates of interest upon which the bonds were originally issued, and, as there is every probability of the statutory rates being paid regularly in future, it is not reasonable to expect the bondholders to agree to any scheme which so seriously prejudices their rights and expectations.

"(b) The possibility that the additional burden of interest and redemption in respect of the £85,000 which it is proposed to advance on loan, may be beyond the earning capacity of the harbour.

"According to the figures put before the Committee, the gross additional annual income which might be received by the harbour when the full development of the trade of the port has been attained, would be about £4,000.. From this amount would have to be deducted rates, insurance, the cost of additional staff, maintenance of plant, dredging, and possibly the provision and maintenance of another tug. It would therefore appear improbable that the net additional income would equal the interest and instalments of the redemption.

"Any attempt to increase the income of the harbour by the raising of shipping dues would be fatal to all concerned. Increased dues would result in loss of trade, decreased harbour income, and more unemployment than ever.

"In the view of the Committee, the Government would make a notable step towards reducing the unemployment in this district by granting the whole of the money required for the improvement of the harbour."

Mr. Malcolm Stewart, the Special Areas Commissioner, when visiting Cumberland, said he intended to recommend to the Government a scheme for improving the dock facilities at Whitehaven. It was based on the assumption that improved facilities could be provided at a cost of £100,000. The proposal was that, first of all, there should be a grant outright of £15,000 and then an advance in the nature of a loan of £85,000 at 3½ per cent. interest, with a sinking fund. The qualifying condition would be that the loan rank equally with existing A bonds, that the Harbour Commission agree to waive all arrears of interest and participating rights. He was prepared to consider the postponement of interest and sinking fund charges during the construction period. The Harbour Commission, he said, must not sit back and do nothing when there was a definite demand for increased facilities which would bring increased trade and employment, nor must they make the fact of unemployment an excuse for not doing their duty by improving the docks. He urged the Commission to consider the proposals immediately, so that no time would be lost. He considered harbour improvements the most far-reaching in importance of the schemes prepared in West Cumberland.

Manchester Ship Canal Tonnage.

Particulars have been submitted to the Manchester Corporation of the toll-paying merchandise traffic and receipts of the Manchester Ship Canal for each of the 41 years during which the Ship Canal has been open for traffic. Here are a few comparative statistics:—

Year	Seaborne Traffic Tons	Barge Traffic Tons	Ship Canal Tolls, Ship Dues, and Miscellaneous Rects. £
1934	5,776,819	173,151	1,317,083
1933	5,168,478	220,591	1,240,405
1930	6,094,719	195,906	1,395,567
1926	6,553,780	297,099	1,592,219
1920	4,099,326	288,037	1,461,909
1913	5,457,218	322,943	654,937
1910	4,618,070	319,561	555,785
1900	2,784,843	275,673	290,830
1895	1,087,443	271,432	137,474

The total expenditure on capital account amounts to £20,296,610, and the gross receipts from businesses carried on by the Manchester Ship Canal Company amount to £1,788,304, the expenditure being £1,016,490. Interest on loans and debenture stocks amounted to £431,792, and dividends on preference stocks £177,139. The amount carried forward to the 1935 accounts is £34,825.

At the annual general meeting of the Manchester Ship Canal Company, Mr. F. J. West said net receipts from the working of the Manchester Ship Canal for the year amounted to £687,278—an increase of £70,066 over the previous year. Working of the Bridgewater Canals shows an improvement of £1,015, and railways an increase of £6,494. The increase in revenue from the Bridgewater Canals would have been better but for the loss in toll, due to the closing of the Trent and Mersey Canal from 10th July to 12th October, owing to the drought.

The tonnage of railway traffic passing over the Company's railways again shows a satisfactory expansion, being approximately 470,000 tons more than in 1933.

Bearing in mind the reductions in expenditure made during the last four years and the increase in expenditure in the current year's receipts, this relatively small increase may be regarded as not unsatisfactory. Maintenance of the canal, including dredging, shows an increase of £4,395. Dredging alone shows a substantial reduction, costing £7,267 less than the previous year. This expenditure is largely dependent on weather and other conditions over which we have no control.

The canal undertaking had now been in actual operation for 41 years, and whilst great care and attention have been given to the maintenance of the whole of the waterway, its docks, locks and all its vast equipment, is in a first-class and efficient condition, it is the considered opinion of the Board that this fund should be steadily increased in future years, so that any unexpected or unforseen demands can be met without undue interference with dividends.

Weser Inland Shipping in 1934

During the year 1934 Weser water conditions were very unfavourable, due to drought. They were even worse than the bad years 1911 and 1921.

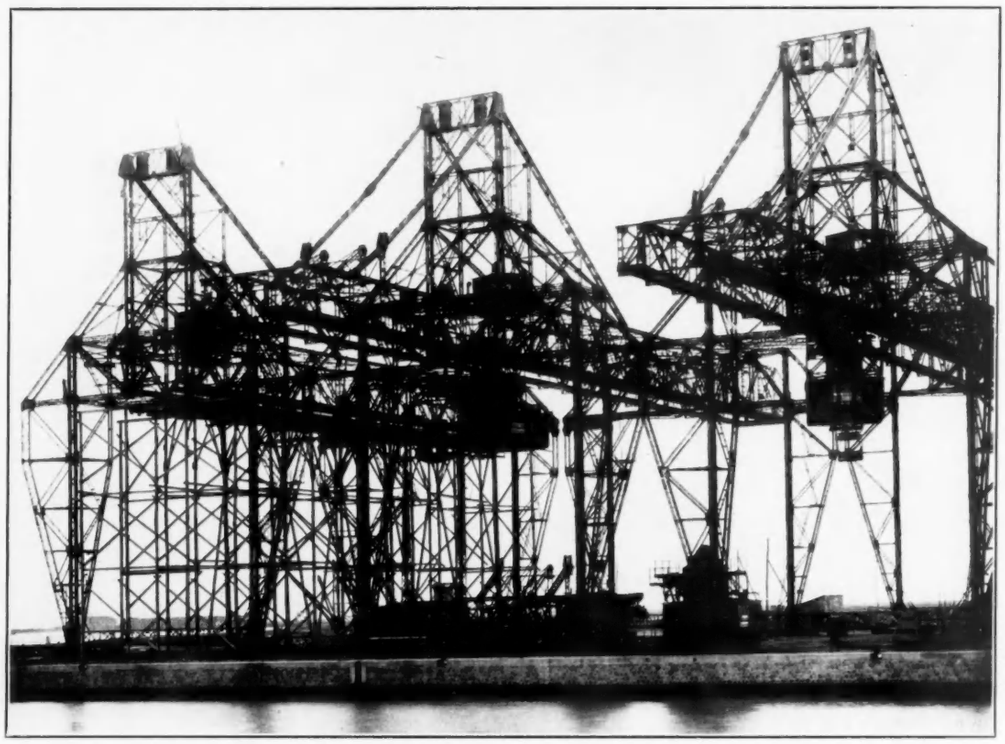
It was only possible to load barges to full capacity on the Upper Weser on eight days in January and seven days in March. From the end of April on, the water level had already to be improved by supplies from the Eder reservoir. Average draft depths were between 1 metre and 1.17 metre, so that vessels could only be loaded up to a third of their capacity throughout the year.

Conditions were similar on the Middle Weser. Hindrance through high water did not occur, but the blockage through ice, which commenced on the 5th December, 1933, continued into January, 1934.

The extraordinary number of days on which full loading was not possible—350 on the Upper Weser and 328 on the Middle Weser—once more plainly illustrates the urgent necessity of commencing the canalisation of the river.

In the year 1934 a total of 1,515,500 tons passed through the Bremen Weser Lock, as compared with 1,370,800 tons in 1933. This is an increase of 144,700 tons, or 10½ per cent., and equals the amount carried during the month of December. Compared with December, 1933, which was almost throughout blocked by ice, the last month of 1934 showed no blockage through ice. It is due to this that the year under report exceeds that of 1933. In spite of this increase in quantity, however, business results for shipping itself were most unsatisfactory, due to the extraordinary charges on account of the bad water conditions. Increase in downstream traffic was comparatively slight and only exceeded that of the previous year by 41,000 tons, or 4 per cent., whereas upstream traffic with 441,300 tons, showed an increase of 103,700 tons, or 31 per cent. The reason for this very much more unfavourable development in downstream traffic is a further reduction of coal transport to Bremen and the Lower Weser ports on account of the excessive canal dues for bunker coal. The falling off in coal (minus 37,000 tons), is also the sole decrease which has taken place in goods borne in this direction. All other goods rose. For instance, potash salts increased by 37,000 tons, German grain (coming from the interior) by 16,000 tons, cement by 12,000, gravel and stones by 8,000, and piece-goods by 4,500 tons. Upstream, all goods, with the exception of phosphate and iron pyrites, which decreased, showed an increase. Piece-goods amounted to 48,000 tons more, grain and flour 20,000 tons each, foreign coal 15,000 tons, rice 4,500 tons, scrap 4,000 tons, and timber 1,000 tons more.

Italian Harbour Affairs



New Electric Coal Unloading Plant in the Marghera Zone of the Port of Venice.

SHIPPING at Italian ports during the year 1934 included the arrival and clearance of 547,963 ships, representing 182,402,645 n.r.t. carrying 39,823,106 tons of goods and 7,098,991 passengers, against 519,641 vessels representing 172,254,801 n.r.t. carrying 33,673,178 tons of goods and 7,027,162 passengers.

Shipping at the various Italian ports during 1934 is as follows:—

		ARRIVALS and CLEARANCES			
		Ships No.	N.R.T.	Goods Unloaded Tons	Goods Loaded Tons
Savona ...	1934	3,998	3,647,950	2,065,222	344,621
	1933	3,424	3,109,356	1,581,656	293,592
Genoa ...	1934	12,463	21,362,741	6,153,481	1,066,398
	1933	11,963	20,200,877	5,366,295	1,132,388
Leghorn ...	1934	8,100	8,286,088	1,480,640	390,129
	1933	7,700	7,820,418	1,190,513	396,514
Civitavecchia	1934	3,334	4,149,938	1,093,576	165,825
	1933	3,197	4,050,897	829,653	150,624
Naples ...	1934	19,641	22,813,639	1,784,013	337,753
	1933	21,509	20,702,357	1,493,986	359,413
Brindisi ...	1934	2,570	5,238,468	145,681	22,350
	1933	2,664	5,122,356	113,963	25,072
Bari ...	1934	3,998	3,585,946	318,994	50,423
	1933	3,563	3,501,215	271,103	52,696
Ancona ...	1934	5,350	3,091,930	614,197	54,768
	1933	4,733	2,886,162	360,292	85,569
Venice ...	1934	9,293	10,654,706	3,279,547	477,558
	1933	8,353	9,666,009	2,448,328	518,874
Trieste ...	1934	34,236	11,001,361	1,824,635	652,958
	1933	34,054	10,482,757	1,361,718	530,240
Fiume ...	1934	11,655	4,136,202	373,089	222,014
	1933	11,520	3,969,984	399,429	170,360
Messina ...	1934	7,068	4,590,827	317,473	127,444
	1933	6,823	4,338,311	305,435	120,877
Catania ...	1934	6,692	4,258,034	484,288	180,244
	1933	5,724	4,211,096	429,731	204,133
Syracuse ...	1934	3,590	2,985,059	82,195	73,048
	1933	3,422	2,868,343	76,598	62,958
Palermo ...	1934	11,625	7,256,179	602,653	162,022
	1933	7,268	7,090,061	459,175	151,366
Cagliari ...	1934	2,934	1,860,301	333,222	365,048
	1933	2,769	1,739,088	229,817	364,662

While imports have shown an increase at every Italian port, except Fiume, exports have shown a decrease at Genoa, Leghorn, Naples, Brindisi, Bari, Ancona, Venice and Catania.

It may be interesting to add that both at Genoa and Naples the share of Great Britain in imports has increased. Further, in regard to the passenger trade, it may be added that there has been an increase of about 3,000 passengers in the Port of Brindisi, confirming the pregressive importance of that harbour in regard to connections with the Near and Far East. As a matter of fact, thanks to the increased speed of the Italian trains, it is possible to save over one day in travelling from London to Alexandria via Brindisi in respect to the route through other Mediterranean ports.

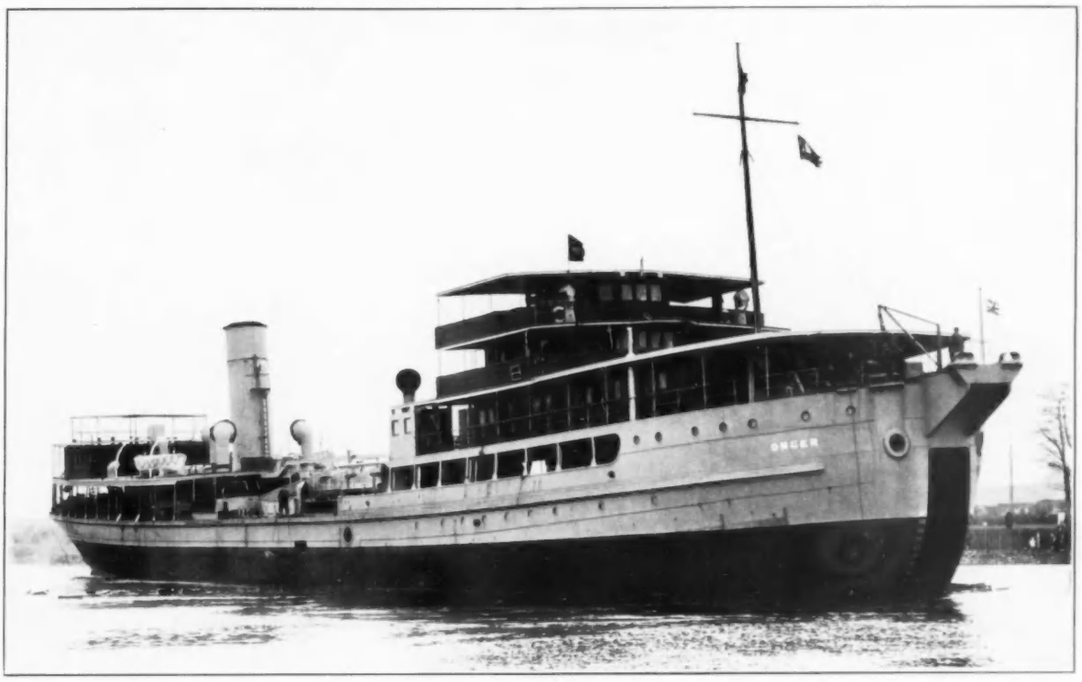
The development of the various trades at Italian ports, regarding the main items of goods imported, are as follows:—

		COAL Tons	CEREALS Tons	COTTON Tons
Genoa	1934	2,814,927	428,320	114,202
	1932	2,230,554	683,904	162,862
Savona	1934	1,608,652	5,373	581
	1932	1,130,227	3,430	204
Leghorn	1934	918,965	40,382	1,882
	1932	601,601	85,520	2,716
Civitavecchia ...	1934	741,107	3,365	—
	1932	510,346	50,295	—
Naples	1934	776,699	93,495	6,885
	1932	575,283	253,593	6,160
Palermo	1934	231,655	671	—
	1932	111,865	895	—
Catania	1934	118,859	14,195	—
	1932	50,889	45,989	—
Trieste	1934	451,219	36,086	55,123
	1932	365,985	106,549	28,969
Fiume	1934	49,142	9,962	5,066
	1932	27,392	20,193	2,185
Venice	1934	1,586,184	99,140	58,816
	1932	922,350	265,804	48,286

The 1934 figures have been compared with the 1932 figures to show the developments which have taken place in the course of the past two years. While imports of cotton have shown a decline at Genoa and other West Italian coast ports, they have shown an increase at Venice, Trieste and even Fiume. The new coal unloading facilities in the Marghera Docks, Venice, include four electric elevators, two of which have been built by the Cantieri Riuniti del-l'Adriatico at Trieste. The grab can take 2½ tons at each movement.

In the Marittima Docks additional warehouses and cranes have been built, but the most interesting work carried out in the Port of Venice is undoubtedly the reconstruction of the Schiavoni Quay looking into the St. Mark Basin. When completed, this quay will enable passengers from 30,000-ton liners to land direct from the ships to the quay, whereas often these ships have been forced to anchor off the Lido breakwaters, and the passengers have been taken to Venice by means of small steamers chartered for such purpose.

New Dredger for Basrah Launched



The New Dredger "Onger."

Messrs. Wm. Simons and Co., Ltd., Renfrew, launched, on Tuesday, March 19th, the drag and cutter suction hopper dredger "Onger," which they have constructed for the Crown Agents for the Colonies, acting for and on behalf of the Basrah Port Directorate for work at Basrah, Iraq.

The dredger has been constructed under the direction of Messrs. Coode, Wilson, Mitchell and Vaughan-Lee, Consulting Engineers, London.

The vessel is fitted with two sets of triple expansion surface condensing engines, and steam is supplied by three cylindrical multi-tubular boilers, fitted with forced draught and oil-burning installation.

The dredging outfit consists of a set of triple expansion engines, driving a centrifugal pump, coupled to a suction pipe, fitted in a frame carrying a drag head, and has a dredging capacity of 2,000 tons of solids per hour.

For dealing with compact material the frame is arranged for the fitting of a spiral cutter driven by machine-cut steel gearing from an independent set of compound surface condensing engines. The suction frame is designed to dredge to a depth of 45 ft. under water.

The hopper is of the dry-bottom type, arranged for discharging by the suction pump through suitable ducts with very extensive flushing and sluicing arrangements. Special arrangements are provided whereby the material may be discharged ashore or through a floating pipe-line.

The engine-room outfit includes independent condensing plant, automatic feed pumps, bilge pumps, service pumps, fresh-water pumps, filter and evaporator.

The naming ceremony was performed by Miss Honor Ward, daughter of Colonel Ward, C.M.G., C.I.E., etc., Port Director and Director-General of Navigation, Basrah Port Directorate, Basrah, Iraq.

Port of London Notes

London's Shipping.

During the week ended February 22nd, 874 vessels, representing 877,762 net register tons, used the Port of London. 399 vessels (677,141 net register tons) were to and from Empire and Foreign Ports and 475 vessels (200,621 net register tons) were engaged in coastwise traffic.

Eleven timber-laden vessels docked with 4,779 tons of softwood.

* * * *

During the week ended March 1st, 990 vessels, representing 890,115 net register tons, used the Port of London. 419 vessels (670,149 net register tons) were to and from Empire and Foreign Ports, and 571 vessels (219,966 net register tons) were engaged in coastwise traffic.

Eleven timber-laden vessels docked with 6,696 tons of softwood.

* * * *

During the week ended March 8th, 947 vessels, representing 950,117 net register tons, used the Port of London. 477 vessels (743,476 net register tons) were to and from Empire and Foreign Ports, and 470 vessels (206,641 net register tons) were engaged in coastwise traffic.

Thirteen timber-laden vessels docked with 10,978 tons of softwood.

* * * *

During the week ended March 15th, 1,116 vessels, representing 893,013 net register tons, used the Port of London. 417 vessels (686,910 net register tons) were to and from Empire and Foreign Ports, and 699 vessels (206,103 net register tons) were engaged in coastwise traffic.

Thirteen timber-laden vessels docked with 9,177 tons of softwood.

* * * *

During the week ended March 22nd, 1,046 vessels, representing 958,323 net register tons, used the Port of London. 459 vessels (689,249 net register tons) were to and from Empire and Foreign Ports and 587 vessels (219,074 net register tons) were engaged in coastwise traffic.

Ten timber-laden vessels docked with 6,151 tons of softwood.

Another Record at Tilbury.

During February thirty-five vessels, totalling 328,375 gross register tons, used the Tilbury Passenger Landing Stage and embarked or disembarked 4,669 passengers, in addition to large quantities of baggage and mails. This was a record for any previous month of February.

Vickers, Ltd.

The Directors of Vickers, Limited, recommend, for approval in General Meeting, a dividend for the year 1934 at the rate of six per cent., less Income Tax, at 4s. 6d. in the £ on the Ordinary Shares of the Company. This dividend, if approved, will be paid on Thursday, the 4th April, 1935.

News from all Quarters

South Africa

The traffic through the main ports of South Africa for the month of December, 1934, will be seen from the following table:—

	Cape Town	Port Elizabeth	East London	Durban
No. of Ships ...	168	85	105	170
Freight in Tons—				
Unloaded	121,273	41,154	36,854	145,491
Loaded	26,800	15,744	11,840	291,430
Reloaded	1,111	21	7	804
	149,184	56,919	48,701	437,725

Canada

The total tonnage of the goods handled in the Port of Montreal during the year 1934 amounted to the considerable figure of 5,007,630 r.t. This was not, however, a record, but was exceeded by that of the years 1925 and 1928. Exports showed a decrease, as compared with 1933, owing to the reduced shipping of grain. In fact, the harbour had the very unusual experience of importing grain, for 12,000,000 bushels of various kinds were introduced from the Argentine, India and other countries for furtherance to the U.S.A. Consequently, imports showed an increase, and totalled about 5,000,000 tons, as compared with 4,500,000 tons in 1933, 4,000,000 tons in 1932, and 3,500,000 tons in 1931. Coal and oil were amongst the most important commodities handled.

U.S.A.

The traffic in the harbour of New York in the last quarter of 1934 showed a decrease over that of the earlier months of the year. Thus, the total number of ships entering the harbour amounted to 429 with 2,080,505 r.t. in October, 412 with 1,834,078 r.t. in November, and 424 with 1,706,480 r.t. in December. The total traffic for 1934 amounted to 5,099 vessels with 25,290,476 r.t. entering and 5,265 vessels with 25,809,504 r.t. clearing.

Ecuador

The number of vessels entering and clearing the Port of Guayaquil in the year 1934 amounted to 382. The total commodities unloaded weighed 51,487 tons, and those loaded 34,116 tons, making the complete goods handled 85,603 tons.

French Possessions

It is reported that according to a preliminary estimate the traffic in the harbour of Saigon, the principal port of Indo-China, showed, in 1934, an improvement over the 1933 figures. There was a marked increase not only in the tonnage of the vessels entering and clearing, but in the amount of the goods handled.

In several of her colonies, France has recently been executing a number of important harbour works, partly with a view to decreasing unemployment. Thus, in West Africa extensive improvements have been made in the harbours of Dakar, Abidjan, Konacry, Kaolack, Saint Louis, Casamance and Saloum. Similar works have been carried out in Madagascar in a number of ports, including Tamatave, Majunga, and Diego Suarez, and a long-needed lighthouse has also been erected. Finally in the Cameroons the harbour of Duala has been re-constructed, and additional facilities provided, the largest improvement being a new quay some ninety metres in length.

Australia

The annual report of the Sydney Harbour Trust states that during the twelve months ending June 30th last, the volume of traffic which entered the port was the second largest on record. The aggregate tonnage was 16,354,219, only 1.04 per cent. less than for the record year ending June 30th, 1927, when it was 16,526,798. The total number of vessels which arrived during the year 1933-34 was 6,498, an increase of 183 over the previous year. This comprised 1,259 oversea, 1,074 inter-State, and 4,165 intra-State ships.

Danzig

Plans have been made for the extension of the inner harbour by the removal of the northern spur of Speicher Island, which will considerably increase the water area in the basin.

A decline in the traffic of the harbour already commenced to make itself felt in January, and became still more noticeable in February. In the latter month, 276 ships with 175,181 n.r.t. entered the harbour, as compared with 352 ships with 236,121 n.r.t. in the former. Of these, 132 with 83,483 n.r.t. were loaded, as compared with 132 with 92,350 n.r.t. The number of ships clearing was 282 with 180,520 n.r.t. in February, as compared with 358 with 250,093 n.r.t. in January. Of the February total, 260 ships with 169,195 n.r.t. were carrying cargo.

Japan

The ocean-going traffic of the Japanese harbours showed, in the year 1934, a further improvement. The increase, measured in tonnage, amounted to 7.06 per cent., which is a considerable figure, although not so large as the increase in 1933, which was almost 10 per cent. The following table compares the traffic of the past three years:—

	VESSELS ENTERING		VESSELS CLEARING	
	No.	Tonnage in 1000 BRT	No.	Tonnage in 1000 BRT
1934 ...	19,786	65,981	19,666	65,544
1933 ...	18,864	61,629	18,771	61,197
1932 ...	17,395	56,038	17,307	55,719

The following table shows that all the principal harbours had a share in the increase of tonnage, that Kobe easily maintained its position as the first port of the country, in spite of the competition of Osaka, and that the increase in the tonnage in Yokohama fell short of the average increase worked out for the whole of Japan, whilst that in the harbours of Moji and Nagoya exceeded it:—

	Tonnage in 1000 BRT					
	1934		1933		1932	
	No.	Tonnage	No.	Tonnage	No.	Tonnage
Kobe	4,145	15,649	3,955	14,769	3,902	14,532
Yokohama ...	2,613	10,902	2,553	10,537	2,422	10,087
Osaka	2,814	9,190	2,751	8,682	2,411	7,076
Moji	2,948	8,675	2,799	7,993	2,459	6,805
Nagoya	1,621	5,439	1,504	5,001	1,336	4,236
Miike	669	2,462	657	2,345	458	1,599
Wakamatsu ...	720	1,805	685	1,651	538	1,300
Nagasaki	462	1,492	440	1,384	408	1,244
Shimizu	340	1,348	289	1,217	276	1,180
Otaru	321	896	302	814	364	983
Yokkaichi ...	240	846	238	770	252	930
Tokuyama ...	191	632	162	509	121	361
Hakodate ...	248	583	201	401	284	579
Muroran	207	582	145	381	82	207
Other Harbours...	1,303	2,873	1,303	2,799	1,329	2,848
	18,842	63,374	17,984	59,253	16,642	53,967
Harbours not Officially Opened	944	2,607	880	2,376	753	2,071
Total ...	19,786	65,981	18,864	61,629	17,395	56,038

The improvement in the volume of traffic also shows itself in the increased value of the goods handled. Thus imports and exports amounted, in the past three years, to:—

	In 1000 Yen	
	Exports	Imports
1934	2,171,925	2,282,531
1933	1,861,046	1,917,220
1932	1,409,992	1,431,461

The share of the various harbours in the value of the goods handled was very unequal. Thus, whilst exports through Yokohama fell from 500,888,000 yen in 1933 to 490,201,000 yen in 1934, imports rose over the same periods from 456,354,000 yen to 537,316,000 yen. The opposite was the case in Nagoya, where the value of exports rose from 89,420,000 yen to 115,515,000 yen, and that of imports fell from 91,178,000 yen to 88,526,000 yen. In Kobe and Osaka, the other most important harbours, both exports and imports increased in value. Exports rose from 650,539,000 yen to 790,601,000 yen in Kobe, and from 463,529,000 yen to 586,180,000 yen in Osaka. Imports rose from 641,122,000 yen to 791,544,000 yen in the former port, and from 441,692,000 yen to 523,290,000 yen in the latter.

U.S.S.R.

The Soviet Government has made elaborate plans for the construction of a new coaling port on the Black Sea between Poti and Sukhum. It will be called Ochemchiry, which is the name of a small town with which it will be connected. The first part of the work will be the building of two jetties and a number of storage sheds. When these have been completed, it will be possible to ship 400,000 tons of coal per annum. The second part of the work will include the construction of a proper harbour basin, and facilities of the most up-to-date kind. The importance of Ochemchiry should be considerable, if the neighbouring mines of Tkvarchely come up to expectation, and yield the million tons of coal per year which they are expected to be producing by the end of the second Five-Year Plan.

Recent Legal Decisions

THE point in the law of damages discussed in the case of *The London Corporation* 51 T.L.R. 70, appears to be without precedent, and as it is of general application it may suitably be noticed here. Two steamships that were laid up collided at their moorings and both sustained damage. One of them, the "Benguela," was surveyed by a surveyor acting on behalf of both sides and the parties accepting his estimate agreed the cost of repairing the damage at £250. It was also agreed that both vessels were in fault in equal degrees. Before the damage claims came up for assessment, the plaintiffs sold the "Benguela" to foreign shipowners to be broken up. At the reference to assess the plaintiffs' claim, the registrar held that they were entitled to recover the agreed cost of repairs. On a motion in objection to the registrar's report the defendants argued that in the circumstances the sale value of the "Benguela" had not been affected by the collision. It was held that a plaintiff whose chattel had been injured was in law entitled to recover the damage, and it was no concern of the wrongdoer what he afterwards did with his chattel, that the plaintiff having proved that his ship was damaged by the defendant the onus of proving that the plaintiff had in the circumstances suffered no financial loss was on the defendant who had not discharged it by merely proving that the ship had been sold for breaking up.

The decision is an application of the rule that physical damage is quite different from consequential damage. That has been well recognised ever since the case of *The Endeavour* 6 Asp. M.C. 511. There Sir James Hannen put the matter thus:—"The 'Endeavour' has been injured. Her owners are entitled to be paid the amount of such injuries. It has been ascertained that that amount is £464. That is the measure of the defendants' damages and is the amount they are entitled to recover. If somebody out of kindness were to repair the injury and make no charge for it, the wrongdoer would not be entitled to refuse to pay as part of the damages the cost of the repairs to the owner."

A steamer ran ashore and became a wreck within the jurisdiction of Cork Harbour Authority, which had statutory power to remove, at the owner's expense, anything that might be an obstruction or danger to the navigation. Her owners entered into a contract with a Danish firm under which that firm was to remove the wreck to the satisfaction of the Harbour Authority and to indemnify the owners in respect of claims made against them by reason of anything done or omitted to be done "in relation to the removal of the wreck." The shipowners and the Danish firm then jointly took out a policy of marine insurance, which was to cover the Danish firm's liability to the owners under the contract to remove the wreck and to indemnify the owners against any claims made by the Harbour Authority or any other parties by reason of anything done or omitted to be done by the Danish firm in relation to the removal of the wreck. In the result, the Danish firm did not carry out their contract, and the Harbour Authority partly removed the wreck and charged the shipowners with the cost of doing so, and the cost of buoying and lighting it before such partial removal and with a further sum for the future cost of buoying and lighting the remains of it.

In an action by the shipowners on the policy (*Oceanic Steam Navigation Co. v. Evans*, 51 T.L.R. 67) Mr. Justice Branson held that the policy was meant to protect the plaintiffs against liability for acts or omissions by the Danish firm during the removal only and not against their going away and leaving the work altogether, but the Court of Appeal reversed that decision and found that the words "in relation to the removal of the wreck" were of general application and were not limited to something which arose during the actual removal, that the Danish firm's failure to carry out their contract was covered by the terms of the policy, and that therefore the plaintiffs were entitled to recover under it.

The charter party which the Court was called upon to construe in *Seeberg Bros. v. Russian Wood Agency* provided that if cargo could not be loaded by reason of a strike, the time allowed for loading should not count during its continuance. There was also a provision that if a strike was in existence on arrival at the loading port, the charter would automatically be cancelled. The plaintiffs, who were Latvian shipowners, claimed demurrage, and the defendants pleaded the strike clause. It seems that a strike was in progress on arrival of the ship at the loading port—Leningrad—but both parties agreed to waive the cancellation of the charter. The effect of this was that they either kept the existing charter in force or entered into a new one on the same terms, thus continuing the strike clause in force as between them. The point taken in defence seems to have been that there was not in fact a strike at Leningrad, but that for political reasons the labourers had been ordered by the Authorities not to load Latvian ships. Mr. Justice MacKinnon, however, found that in law loading had been prevented by a strike of workmen essential to the loading, and he accordingly gave judgment for the defendants.

Belfast Harbour Commissioners: Annual Report

The Statement of Accounts for the year 1934 shows a gross revenue of £301,441 18s. 7d., a total expenditure of £265,603 7s. 8d., and a net surplus of £35,838 10s. 11d., after making the usual allocations to Sinking Funds, Statutory Borrowing Bank Account and Insurance Fund Account.

The net register tonnage of vessels cleared from the port during the year totalled 3,933,394 tons, being 273,279 tons (7 per cent.) greater than that of the previous year and the highest recorded in the history of the port.

The tonnage of goods imported and exported, viz., 3,435,906 tons, shows an increase of 430,447 tons (14 per cent.) over that of the previous year and is the highest recorded in post-war years.

New tonnage constructed in the shipbuilding yards on the Harbour Estate and cleared during the year comprised eight vessels of 65,001 tons gross and 38,851 tons net register.

The Sinking Funds are in a very satisfactory condition and during the year £11,050 of Belfast Harbour Redeemable Consolidated Stock was purchased on account of the Funds and extinguished.

In pursuance of the provisions of the Belfast Harbour Act (Northern Ireland), 1931, and the terms governing the issue of Belfast Harbour £100 Bonds, 70 Bonds (£7,000) were redeemed by drawings.

The scheme of development comprising the Pollock Dock and Basin and Herdman Channel has been completed. The facilities thereby afforded have proved of the greatest service in meeting the increased trade of the port and, owing to the demand for accommodation in this system, the Commissioners have arranged for the extension in a northerly direction of the Shed on the West side of the Pollock Basin.

The navigational lights in the Victoria Channel have been greatly improved by substituting flashing red lights of 60-candle power for the fixed white lights which marked the port side of the Channel.

Wireless telephony transmitting and receiving apparatus has been installed in the pilot cutter "Edith Williames" and at Spencer Dock, and is proving of great assistance.

In order to relieve congestion at Donegall Quay, the Commissioners have effected an important modification of berthing arrangements, and have authorised the widening and extension of the sheds at the Northern portion of the Quay. This re-arrangement will necessitate the abolition of the old 25-tons steam crane, and it has been decided to provide in lieu thereof a 30-tons crane of modern design which will be installed at the North end of Albert Quay.

The work of draining and consolidating the Board's reclaimed land at Sydenham is being proceeded with and, in order to provide space for the further deposit of dredged material, an additional area of foreshore (about 54 acres) is being enclosed on the North-West side of the existing reclamation.

Numerous other important works of improvement were carried out during the year.

In order to assist the Belfast Corporation in carrying out their scheme for conveying electric energy from their Generating Station, Musgrave Channel, to the County Antrim side of the City, the Commissioners granted permission to the Corporation to lay electric transmission cables under the Victoria Channel and the Herdman Channel and the Commissioners' adjacent lands. The work of excavating and re-filling the cable trenches across the said Channels was carried out by the Commissioners on behalf of the Corporation.

Near Eastern Port Matters

SHIPPING at Greek ports during the period from January to October, 1934, included the arrival of 2,576 ships representing 4,585,314 n.r.t., against 2,626 ships and 4,529,639 n.r.t. during the corresponding period of 1933, and the clearance of 2,153 ships representing 3,784,518 n.r.t., against 2,206 ships and 3,827,117 n.r.t. in 1933. There has been a slight decrease in the number of ships arriving, but an increase in their tonnage; decreases are shown in the number and tonnage of ships cleared. This situation is the result of the restrictions established by the Greek Government in connection with Greek foreign trade. The position of the various foreign countries trading with Greece is as follows:—

	1934				1933			
	ARRIVALS		CLEARANCES		ARRIVALS		CLEARANCES	
	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
America ...	21	68,163	37	125,213	20	76,011	30	109,595
Gt. Britain	156	413,113	152	293,658	141	314,454	130	235,459
Holland ...	29	61,657	38	69,697	39	68,354	43	51,769
France ...	46	186,847	38	168,740	68	227,576	66	234,311
Germany ...	82	192,748	86	193,857	76	137,083	79	119,160
Italy ...	837	1,899,891	819	1,690,504	864	2,073,442	826	1,871,574
Roumania	149	224,845	139	210,880	131	188,273	132	191,602
Greece ...	826	827,562	421	375,562	811	763,058	463	359,963

As far as arrivals at Greek ports are concerned, only Great Britain, Germany and Roumania have shown an increase. In clearances only France and Italy have shown a decline. Though Italy occupies first place in Greek shipping, Great Britain has made considerable progress during 1934.

Pireaus has maintained first place among Greek ports during the first ten months of 1934. Shipping at this port included the arrival of 1,572 vessels representing 3,139,304 n.r.t., against 1,469 vessels representing 3,039,021 n.r.t. for the same period in 1933, and the clearance of 961 vessels representing 1,958,390 n.r.t., against 979 vessels and 2,032,586 n.r.t. in 1933. The position of the various foreign countries calling at the Port of Pireaus may be summarised as follows:—

	1934				1933			
	ARRIVALS		CLEARANCES		ARRIVALS		CLEARANCES	
PIREAUS	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
America ...	20	67,833	3	9,888	19	72,523	3	10,835
Gt. Britain	95	308,253	32	110,738	84	202,721	24	67,276
Holland ...	10	32,638	4	5,669	18	41,996	6	8,172
France ..	40	159,453	35	154,922	63	209,797	62	212,558
Germany ...	46	80,130	12	34,221	47	81,835	13	23,160
Italy ...	502	1,162,045	414	825,511	505	1,275,076	413	943,588
Roumania	122	202,836	109	187,044	104	167,701	100	165,901
Greece ...	501	599,635	179	216,771	399	495,088	188	212,293

Great Britain and Roumania have shown an increase both in regard to arrivals and clearances.

Corfu follows Pireaus, in order of importance, and also in respect to the progress of shipping during 1934. Arrivals during the first ten months of 1934, included 250 ships representing 326,980 n.r.t., against 212 ships and 270,798 n.r.t. in 1933, and the clearance of 239 ships and 295,280 n.r.t., against 179 ships and 234,971 n.r.t. in 1933. The following figures show the position of the various countries calling at the Port of Corfú during the period under review:—

	1934				1933			
	ARRIVALS		CLEARANCES		ARRIVALS		CLEARANCES	
CORFU	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
America ...	—	—	—	—	—	—	1	9,324
Gt. Britain	13	30,728	4	19,256	7	26,220	3	21,909
Holland ...	—	—	1	16,920	—	—	—	—
France ...	1	6,645	1	6,645	1	11,053	1	11,053
Germany ...	9	70,415	10	49,168	6	25,284	5	9,403
Italy ...	75	99,321	78	105,360	83	119,191	77	112,560
Roumania	—	—	—	—	—	—	—	—
Greece ...	74	50,605	75	42,715	49	34,584	47	24,047

Germany has made substantial progress in shipping at Corfú, both in arrivals and clearances, while there has been an increase in arrivals by Great Britain. Shipping firms at Corfú are complaining about the fact that no step has been taken as yet to enable vessels to unload and load in sheltered waters, and that vessels have still to anchor in the fairway. It is pointed out that it should not be difficult to build at least two breakwaters ensuring a certain amount of safety.

At Patras, which occupies third place among Greek ports, shipping has decreased during the first ten months of 1934, as compared with 1933. Arrivals decreased from 175 vessels and 457,391 n.r.t. in 1933 to 169 vessels and 442,779 n.r.t. in 1934, and clearances from 145 vessels and 525,311 n.r.t. in 1933 to 144 vessels and 486,313 n.r.t. in 1934. The following statistics show the position of the various countries calling at the Port of Patras:—

	1934				1933			
	ARRIVALS		CLEARANCES		ARRIVALS		CLEARANCES	
PATRAS	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
America ...	—	—	4	13,969	—	—	1	4,122
Gt. Britain	13	19,146	31	41,809	16	22,179	21	26,459
Holland ...	11	16,016	8	4,478	10	14,378	6	8,194
France ...	1	535	—	—	—	—	—	—
Germany ...	14	17,821	10	15,088	8	9,178	11	14,115
Italy ...	82	350,330	84	394,369	82	354,863	90	455,299
Roumania	—	—	—	—	1	784	—	—
Greece ...	36	22,155	3	7,467	28	28,403	4	6,349

Holland and Germany have shown increases as far as arrivals are concerned, while in departures there have been increases by America, Great Britain and Germany.

Shipping at the Port of Salonika has shown, during the first ten months of 1934, a slight improvement, due chiefly to a larger transit trade with Jugoslavia. Arrivals at Salonika during January to October, 1934, included 102 vessels representing 128,873 n.r.t., against 96 vessels representing 123,307 n.r.t. during 1933, and the clearance of 148 vessels representing 234,671 n.r.t., against 143 vessels representing 217,867 n.r.t. The position of the various countries calling at Salonika may be summarised as follows:—

	1934				1933			
	ARRIVALS		CLEARANCES		ARRIVALS		CLEARANCES	
SALONIKA	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
America ...	—	—	16	54,887	—	—	13	45,372
Gt. Britain	13	13,486	26	43,059	18	26,535	20	30,359
Holland ...	1	1,031	4	6,412	4	4,124	4	5,983
France ...	2	996	—	—	3	2,019	—	—
Germany ...	—	—	7	12,297	1	919	4	6,700
Italy ...	—	—	3	1,768	2	5,928	6	9,232
Roumania	23	16,100	22	16,230	18	13,128	22	17,953
Greece ...	22	32,743	9	15,499	16	31,879	9	19,793

In arrivals, only Roumania has shown an increase, but in departures increases have been shown by America, Great Britain, Holland and Germany. Shipping at other Greek ports for the first ten months of 1934 is as follows:—

	1934				1933			
	ARRIVALS		CLEARANCES		ARRIVALS		CLEARANCES	
	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.	No.	N.R.T.
Volos ...	23	26,901	31	30,585	41	20,693	34	39,942
Heraclon ...	114	79,549	182	126,894	125	114,611	207	142,016
Cavalla ...	27	53,837	14	30,680	32	55,049	15	23,022
Calamata ...	37	38,707	88	104,047	36	35,588	94	97,276
Mytilene ...	58	67,764	58	31,384	101	79,554	65	91,702

Trade at Bulgarian ports during 1934 has shown a slight drop, according to the following figures:—

	Imports Tons	Exports Tons
1930	125,000	332,000
1931	128,000	445,000
1932	116,000	303,000
1933	146,000	263,000
1934	115,000	206,000

Trade at Varna and Burgas in 1934 is as follows:—

	BURGAS		VARNAS	
	Imports Tons	Exports Tons	Imports Tons	Exports Tons
1934	81,205	99,027	33,603	100,875
1933	101,589	131,808	42,391	108,344

Exports from Smyrna during the first nine months of 1934 reached 146,744 tons, being an increase of 50 per cent., compared to the corresponding period of 1933, when exports reached 97,529 tons. This increase is due to the larger demand for barley from Germany, the United Kingdom and Italy. Other increases have been shown in the exports of dried grapes and dried figs.

During the month of December, 1934, shipping at Syrian ports (Beyrouth, Tripoli and Alexandretta) included the call of 154 steamers representing 205,565 n.r.t.

Some of the harbour extensions in the Port of Alexandria (Egypt) have been delayed by the fact that the oil companies operating bunkering stations there, have refused to place at the disposal of the Egyptian Government the ground occupied by their stations and on which the new harbour facilities should be built. On the other hand, the breakwater of the Eastern docks has been completed, the construction on which was commenced in 1930. This breakwater, which has cost 280,000 Egyptian lire, has a length of 600 metres, and for its construction concrete blocks of the following dimensions have been employed: 6 metres in length, 2.80 metres in breadth, 2.25 metres in height, and a weight of 75 tons each.

Thos. Smith & Sons (Rodley), Ltd.: New Publications.

Messrs. Thomas Smith and Sons (Rodley), Ltd., the well-known crane makers of Rodley, near Leeds, have just issued two very interesting publications, which they will be pleased to supply to any of our readers upon application if they mention this journal.

The first of these publications describes very fully the various hand-cranes manufactured by this firm, and these include cranes of the following types: breakdown, portable, travelling, fixed, foundry, jib, overhead, hoisting and derrick. All these cranes are suitably illustrated, and have lifting capacities of ½ ton up to 18 tons.

The other publication describes this firm's universal excavators, which are available in three sizes: ¼ yard, ⅜ yard and ½ yard. These three types can be fitted with Diesel engines, petrol engines or electric motors, as required.

Notes from Far Eastern Ports

Ceylon

Colombo's Shipping Returns.

ACCORDING to statistics just available, more ships with cargo called at Colombo in 1934 than in the two previous years. The totals for the last three years were as follows:—

	No. of Ships	Total Tons
1934	2,093	9,842,010
1933	1,984	9,302,257
1932	2,031	9,296,421

The number of vessels which called to coal in 1934, 1933 and 1932:—

	No. of Ships	Total Tons
1934	208	655,285
1933	198	520,154
1932	220	695,662

The number of vessels in ballast which called in 1934 was 328, compared with 323 in 1933 and 318 in 1932.

The number of vessels which used Colombo in the last three years were:—

	No. of Ships	Total Tons
1934	2,849	12,074,778
1933	2,685	11,472,864
1932	2,764	11,522,699

In regard to vessels cleared, the following are statistics regarding those cleared with cargo:—

	No. of Ships	Total Tons
1934	2,096	10,184,693
1933	2,008	9,754,575
1932	1,980	9,550,589

A New Record.

The considerable activity which prevailed in the Port of Colombo in January is reflected in the latest Port Commission statistics, just available, which show the establishment of a new record in the matter of the traffic using the Lake to Harbour Canal. The largest number of craft which used the canal in any one month since the opening of the locks in November, 1922, passed through the canal in December, 1934, the figure being 1,135.

The total includes 990 lighters, the largest number to use the canal for the year.

Colombo's Coal Imports.

The largest quantity of coal received in Colombo for the past 21 months was handled in November, the amount on that occasion being 56,721 tons. The total quantity of the commodity received in the eleven months of 1934 was 390,612 tons, compared with 398,649 tons in the corresponding period of 1933. The following are the figures for the two periods:—

	1933 Tons	1934 Tons
January	48,356	41,625
February	20,213	19,435
March	44,932	32,287
April	15,131	30,829
May	39,739	37,116
June	45,595	25,286
July	32,487	38,538
August	32,692	35,989
September	52,198	51,866
October	30,105	20,920

Customs Duties.

Import duties collected by the Colombo Customs in January amounted to Rs. 4,447,218, while export duties realised Rs. 349,496, these combining to produce an increase over the same month of last year. The increase amounted to Rs. 1,054,767.

Although harbour dues and pilotage brought in less revenue, the total value of the collections from the Colombo Harbour and outports was higher by Rs. 54,898, compared with those of January, 1934, when the amount was Rs. 560,891. The revenue from the oil installations last month exceeded that of the corresponding month of last year by as much as Rs. 49,040.

India

India's Foreign Trade.

The grand total of India's Customs Revenue collected during the month of December, 1934, amounted to Rs. 4,34 lakhs, as against Rs. 4,82 lakhs in the preceding month, and Rs. 3,99 lakhs in December, 1933. The total revenue realised in the nine months ended December, 1934, was Rs. 39,35 lakhs, as compared with Rs. 36,33 lakhs during the same period last year.

Import duties accounted for Rs. 28,80 lakhs of this amount and the balance export duties.

Bombay Port Trust.

Imports and exports at the Port of Bombay:—

	1933 Quarter ended 31st December			1934 Quarter ended 31st December		
	Import Tons	Export Tons	Total Tons	Import Tons	Export Tons	Total Tons
Docks ...	434,691	434,773	869,464	533,380	437,277	970,657
,, (transshipment)	28,278	40,014	68,292	31,563	45,352	76,915
Bunders ...	255,189	80,464	335,653	273,193	74,261	347,454
Total ...	718,158	555,251	1,273,409	838,136	556,890	1,395,026
Total from 1st Apr. to 31st Dec.	2,181,413	1,673,008	3,854,421	2,323,873	1,709,303	4,033,176

Vessels other than ferry steamers, hired transports, Government vessels and country craft, which entered the Port of Bombay:—

	Quarter ended 31st December, 1933		Quarter ended 31st December, 1934	
	No.	Net Register Tonnage	No.	Net Register Tonnage
Vessels engaged in foreign trade ...	220	988,726	225	1,003,005
Vessels engaged in coasting trade ...	669	516,192	697	570,828
Total from 1st April to 31st Dec. ...	2,100	4,390,683	2,153	4,384,116

Malaya

Singapore's Maritime History.

Jardine's Wharf and the P. and O. Wharf—two monuments of the maritime history of Singapore—are about to disappear.

The P. and O. was the last shipping Company to own its own wharf in Singapore. At a time, before the Tanjong Pagar and New Harbour Companies were formed, that was the usual practice there, and the "Borneo Wharf" still commemorates the time when the Company of that name fended for itself at Tanjong Pagar. Jardine's Wharf was rented by the Harbour Board from the famous Eastern firm of Jardine, Matheson and Co., as recently as 1923, and the P. and O. property was absorbed two years ago.

It is, however, interesting to note that two relics of this phase in the history of the Singapore Harbour are to be preserved. These consist of the original P. and O. boundary stones, which are to be placed one on each side of "Gate No. 8," the entrance to the new wharf. They bear the date 1857—the year when the P. and O. leased the land from Temenggong of Johore—and the crest of the rising sun, the same crest that is used by the P. and O. to-day.

Seaborne Goods Traffic of the Lower Weser Ports during 1934

Total goods traffic of the Lower Weser Ports in 1934, according to a report of the Statistical Office at Bremen, was 7,291,679 tons, that is, 1,622,385 tons, or 29.1 per cent. more than in the previous year. By far the greater part of this increase falls to exports which, at 3,910,704 tons, were 1,356,026 tons, or 53.1 per cent. more than in the previous year. Of the total outward traffic, 3,322,182 tons went, in 1934, via Bremen ports, compared with 2,126,232 tons in 1933. Total incoming goods traffic of the Lower Weser ports at 3,290,975 tons, was 8.8 per cent. more than that of the previous year at 3,024,975 tons. In the Bremen ports 2,801,162 tons were unloaded in 1934, against 2,589,124 tons in 1933.

Vickers, Ltd.

Messrs. Vickers, Ltd., held their 68th Annual General Meeting of the members of the Company on Tuesday, 2nd April, at which the report and balance sheet for the year ended 31st December, 1934, was presented.

The statement of accounts for the year showed that the net Trading Profit amounted to £970,352 4s. 5d., which, after deducting Income Tax, Debenture Interest and other expenses shown by the Profit and Loss Account and which amounted to £357,091 5s. 8d., left a balance of £613,260 18s. 9d.

The Dividends on the Preference Share Capital for the year amounted to £418,190 7s. 0d., which left a balance of £195,070 11s. 9d., and with the amount brought forward from the year ended 31st December, 1933, £224,041 8s. 11d., makes a total of £419,112 0s. 8d. The Directors recommend payment of a Dividend of 6 per cent., less Income Tax on the Ordinary Share Capital, which amounted to £190,889 19s. 9d., leaving a balance carried forward to next year of £228,222 0s. 11d.

Irish Harbour Matters

Galway

Galway Harbour Development.

IN order to improve the navigation of Galway Bay, and at the request of the Transatlantic and other liners using the port, the Galway Harbour Board has decided to proceed with the erection of an unattended lighthouse at Blackhead, on the Clare Coast. The agreement for the site has been approved. This light will be erected near the top of Blackhead, and will be seen by ships as they approach the Aran Islands, or as they proceed from Blackhead to Galway Docks.

It was decided, on the motion of Mr. Kenny, seconded by Mr. O'Flaherty, to approve of the draft of the Harbour Development Bill, as submitted by Messrs. Cartan, O'Meara and Kieran, solicitors, Dublin, and to urge that the Bill be brought before the Committee of the Oireachtas at the earliest possible moment, so that the work of deepening the docks and providing an entry channel, at a cost of over £200,000, may be proceeded with, without further delay.

The projected developments will enable freighters of 6,000 tons to enter the docks, will provide for a warping pier, and will enable tender services to Transatlantic liners to be carried out with the minimum of delay at all states of the tide.

On the motion of Mr. Kenny, seconded by Mr. O'Flaherty, it was agreed to call the attention of the Minister for Agriculture to the fact that Galway had already expended considerable sums on the erection of the live-stock pens and other improvements at the docks.

Dublin

Dublin Port and Docks Board.

The report of the Dublin Port and Docks Board for 1934, states that, in compliance with the provisions of the Dublin Port and Docks Act, 1898, the election of members of the Board took place on 8th January last, when it was declared that Mr. Hugh Kennedy, Mr. Jas. Moran, Mr. Charles M. O'Kelly, and Mr. Thos. R. McCullagh, were elected to fill the four vacancies for Traders' Members, and that Mr. Walter Baird, Mr. Jas. Ward, Mr. William Hewat, and Major Jas. B. Hollwey, were duly elected to fill the four vacancies for Shipping Members, and that Major Jas. B. Hollwey be deemed to fill the vacancy caused by the resignation of Mr. Edward Betson in 1934.

The statement of accounts for 1934 shows a gross revenue of £245,490 0s. 9d., a total expenditure of £227,063 17s. 3d., and a surplus of £18,426 3s. 6d.

The receipts from tonnage dues and dues on goods amounted to £167,399 18s. 10d., being an increase of £12,127 17s. 1d., as compared with 1933.

Mortgage bonds to the amount of £2,600 were paid off out of the sinking fund. The amount of short-term bonds outstanding was thereby reduced from £2,800 at the end of 1933 to £200 at the end of 1934.

The loans outstanding at 31st December, 1934, amounted to £1,226,640 18s. 10d., the balance to the credit of the sinking funds at that date being £203,860 2s. 11d.

TONNAGE.

A statement of the register tonnage which entered the port during the years 1933 and 1934 is as follows:—

	Foreign	
	No. of Vessels	Reg. Tonnage
1933	907	934,567
1934	904	1,096,832
Increase	—	162,265
Decrease	3	—

	Cross Channel and Coasting	
	No. of Vessels	Reg. Tonnage
1933	4,325	1,488,170
1934	3,944	1,463,135
Increase	—	—
Decrease	381	25,035

IMPORTS.

Imports through the Port of Dublin during the past two years were:—

		1933		
		Foreign Tons	Cross Channel Tons	Irish Coasting Tons
General Goods		619,266	418,365	17,644
Coal		572,393	539,988	—
		Loads	Loads	Loads
Timber (all kinds) ...		104,280	3,782	4

		1934		
		Foreign Tons	Cross Channel Tons	Irish Coasting Tons
General Goods		753,050	454,853	8,863
Coal		669,597	470,152	—
		Loads	Loads	Loads
Timber (all kinds) ...		163,973	3,985	951

EXPORTS.

		1933		
		Foreign Tons	Cross Channel Tons	Irish Coasting Tons
General Goods		40,872	319,099	33,158
		Loads	Loads	Loads
Timber (all kinds) ...		6	3,602	375

		1934		
		Foreign Tons	Cross Channel Tons	Irish Coasting Tons
General Goods		43,712	326,729	30,092
		Loads	Loads	Loads
Timber (all kinds) ...		—	3,053	483

Total goods imported and exported (one load of timber taken as equal to one ton):—

		1933 Tons	1934 Tons
Imports		2,305,722	2,525,424
Exports		397,312	404,069

Cattle exports show a steady fall since 1930, when they totalled 410,245 head. In 1931, they totalled 378,655; in 1932, they were 315,661; in 1933, they stood at 318,539, while last year the total was 260,500.

Sheep exports have fallen from a total of 378,068 in 1930 to 222,601 in 1933, and 258,912 in 1934.

Pig exports fell from 109,425 in 1930 to 19,503 in 1933, and 28,467 in 1934.

Exports of horses continue to be maintained at a remarkably level figure. In 1930 they amounted to 5,563; in 1931 they stood at 5,351; in 1932 they fell to 4,027; in 1933 the number was 4,329, while in 1934 the figure was 5,674.

The number of mules and asses exported was 198 in 1930, and 346 in 1934.

The Port of Amsterdam

Statistics for the Port of Amsterdam in regard to number of vessels and tonnage and to goods traffic arrived and sailed, as compared with the corresponding figures of last year, are as follows:—

SEAGOING VESSELS AND TONNAGE.

	ARRIVALS				SAILINGS			
	No.	Per Cent.	N.R.T.	Per Cent.	No.	Per Cent.	N.R.T.	Per Cent.
Jan. 1934 ...	278		391,154		290		427,245	
,, 1935 ...	238		382,807		249		412,416	
	—40	—14·39	—8,347	—2·13	—41	—14·14	—14,829	—3·47
Dec. 1934 ...	252		381,579		244		363,710	
Jan. 1935 ...	238		382,807		249		412,416	
	—14	—5·56	+1,228	+0·32	+5	+2·05	+48,706	+13·39

SEAGOING GOODS TRAFFIC.
(In Tons of 1000 Kilos*).

	1 Import	2 Transit incl. in col. 1	3 Export	4 Transit incl. in col. 3	5 Total col. 1 & 3
Dec. 1933	334,146	58,338	115,593	52,285	449,839
,, 1934	275,146	61,646	136,869	59,311	412,015
	—59,000	+3,308	+21,176	+7,026	—37,824
	—17·66%	+5·67%	+18·30%	+13·44%	—8·41%
Nov. 1934	326,456	74,793	157,307	75,070	483,763
Dec. 1934	275,146	61,646	136,869	59,311	412,015
	—51,310	—13,147	—20,438	—15,759	—71,748
	—15·72%	—17·58%	—12·99%	—20·99%	—14·83%
Jan.-Dec 1933 ...	3,461,176	688,662	1,528,581	583,770	4,989,757
,, 1934 ...	3,656,938	733,125	1,674,092	710,986	5,331,030
	+195,762	+44,463	+145,511	+127,216	+341,273
	+5·66%	+6·46%	+9·52%	+21·79%	+6·84%

* These figures have been taken from the monthly statistics of the Central Bureau, The Hague, Holland.

Classified according to flag the number of vessels which entered the Port of Amsterdam during January, 1935, was:—Dutch, 129; Great Britain, 37; German, 26; Swedish, 16; Norwegian, 12; Danish, 2; French, 3; Greek, 3; Spanish, 2; Lettish, 1; Italian, 2; Belgian, 1; Dantzic, 2; Russian,, 2.

CLYDE CRANES

Level Luffing Cranes at G.W.R. Swansea.

Clyde Crane and Engineering Co., Ltd.,
MOSSEND, near GLASGOW.
Telephones—Head Office and Works: Motherwell 355.
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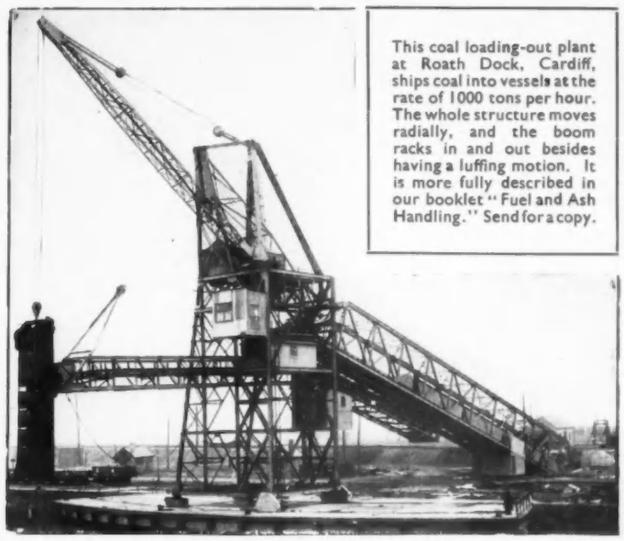
Telegrams—
"Clyde, Motherwell."



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JAN-FEB IMPORTS £118,233,000	JAN-FEB EXPORTS £69,578,000

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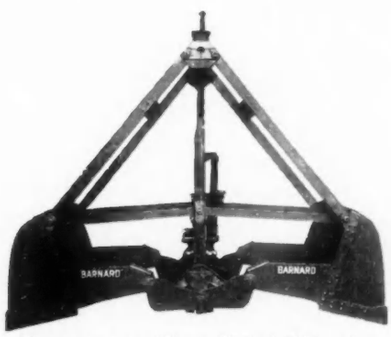
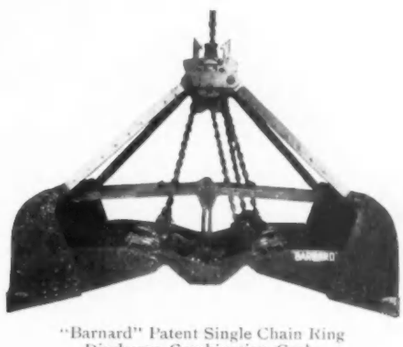


"Barnard" Patent Single Chain Self Dumping and Hand Tipping Type Combination Grab.



"Barnard" Patent Single Chain Ring Discharge Combination Grab.

AS RECOMMENDED BY LEADING HARBOUR AUTHORITIES, COAL FACTORS, STEVEDORES, GAS COMPANIES, CONTRACTORS, ETC., ETC.

MANUFACTURED BY

Wm GOODACRE & SONS
LIMITED
RUSSELL ROAD, VICTORIA DOCKS, LONDON, E.16

TELEGRAMS: "GOODACRE," LONDON. TELEPHONES: ALBERT DOCK 1742-3-4. CODES: A.B.C. 5TH EDITION AND BENTLEY'S.

VED HENVENDELSER TIL ANNONCERENDE BEDES DE REFFERERE TIL "THE DOCK AND HARBOUR AUTHORITY."

Port of Southampton Topics

Remarkable Growth in Passenger Traffic.

Southampton's reputation as the premier passenger port in the United Kingdom is growing year by year.

It is not very long ago that Southampton was struggling to gain the honour, with Liverpool occupying the headship and London making a bold bid for fame. From the time that Southampton once wrested the leadership from Liverpool she has never looked back, and the 1934 figures of passenger traffic for the whole of the United Kingdom show that the position is being consolidated.

Of the total of 401,044 passengers outward and inward in 1934, 37 per cent. were recorded at Southampton, 22 per cent. in London, and 21 per cent. at Liverpool, as compared with percentages of 35, 22 and 22 respectively in 1933.

Of the numbers travelling on pleasure cruises to places outside Europe, more than three-quarters embarked at Southampton or Liverpool.

The total passengers passing through Southampton to or from places outside Europe during 1934 was 147,108, made up of 79,504 outward and 67,604 inward. In 1933 the total was 134,067, made up of 69,975 outward and 64,092 inward.

Statistics for February show Decreases.

Southampton Docks statistics for February are not so favourable as those for January, and numerous decreases are recorded in comparison with the figures for February, 1934. It is a matter of gratification, however, that the fall in traffic is not considerable.

The number of vessels inward was 166, as compared with 169, and outward 164, as against 168. This slight decline accounted for the lesser tonnage which was handled.

The gross figures were less by 77,410 tons inward and 86,458 tons outward, and the net returns were down by 28,376 tons inward and 21,799 tons outward.

Inward gross tonnage amounted to 920,639 tons, as compared with 998,049 tons, and outward the figure was 999,761 tons, as against 1,036,219 tons. Inward net tonnage was 496,817 tons and outward 535,231 tons, as compared with 525,193 tons and 556,730 tons respectively.

The volume of freight handled during the month was similar to the total in February, 1934. Imports amounted to 36,001 tons in contrast with 36,817 tons, and exports to 29,791 tons, compared with 29,753 tons. This gives a decrease of 816 tons in imports and an increase of 38 tons in exports.

The passenger returns showed an aggregate increase, for although the total of arrivals was 641 less than in February last year, the outward figure was up by 1,182. The number of passengers arriving was 3,945, as against 4,586, and departing 7,173, as against 5,991.

Trooping movements fell by 3,567 inward and 485 outward, the respective returns being 1,572, compared with 5,139 inward and 4,610, compared with 5,095 outward.

North German Lloyd's Far Eastern Service.

The Far Eastern service, which is to be maintained by the North German Lloyd, consequent upon the agreement reached between that Company and the Hamburg-America Line, will be officially opened in May by the "Scharnhorst," which will call at Southampton on May 14th.

When the schedule was first announced it was indicated that there would be two ships on the run, but a third has since been added. It is the object of the Company to provide a monthly service, calling at Southampton, both outward and homeward, but this will not be possible until all three ships are in commission, unless the "gaps" are filled by drafting other steamers into the service.

The "Potsdam" will make her maiden voyage in July and the third vessel, the "Gneisenau" in December.

By the end of the year the service will be in full working order.

Winter Overhaul of Large Liners Completed.

With the re-conditioning of the "Majestic" the annual winter overhaul of the large vessels engaged on the North Atlantic was concluded.

The situation in the ship repairing and engineering establishments in Southampton, however, was improved early in March by the contract secured by Messrs. Harland and Wolff, Ltd., thoroughly to re-condition the "Ebro" for her new owners, the Jugo Slav Lloyd.

The "Ebro" was engaged for some time on the Pacific Steam Navigation Company's service from New York to the Pacific Coast ports, but for the past four years she has been laid up at Dartmouth.

She will leave Southampton, on May 7th, as the "Princess Olga." She will be engaged in the passenger trade between Trieste, Haifa and Alexandria.

Clyde Navigation Trust

Last year, following upon the continuous activities of the Commercial Manager of the Clyde Navigation Trust, an itinerary was arranged of nine vessels taking South African citrus fruit for the first time direct to Glasgow, which hitherto had been shipped to and distributed from Southampton.

With a view to stimulating interest and to an increased development this year, a visit, under the auspices of the Clyde Trust, was arranged for Mr. F. J. du Toit, the newly-appointed Trade Commissioner to the Union of South Africa in London, who spent several days in Glasgow meeting and conferring with interested traders and investigating the possibilities for more direct ships and larger cargoes to the Clyde.

Mr. du Toit had many conferences with Mr. Harold M. Ford, the Commercial Manager, and the various importing fruit interests operating on the Glasgow Fruit Market.

He was entertained to a luncheon in his honour, given by the Lord Provost of Glasgow, Sir Alexander B. Swan, and visited the Royal Exchange, where he was received by the President, Directors and some 400 members.

In the speeches made at the Lord Provost's luncheon, one or two interesting features affecting the future development of South African trade were emphasised. The Lord Provost, in reviewing the situation, commented on the fact that the nine vessels to the Clyde last year brought approximately 180,000 cases of fruit, which were sold not only at prices comparable but generally better than those prevailing in London, and pointed out that in addition there had been affected a further saving in port and overland transport charges of nearly 2s. per case, which hitherto had been incurred through drawing supplies from Southampton.

The Lord Provost went on to refer to the fact that under the arrangements made last year Glasgow and Liverpool received alternate vessels with Southampton, it being stipulated that all vessels must first call at that port, and expressed surprise that this cumbersome method should be resorted to when it was realised that Glasgow was the third largest fruit market serving a population in Scotland, the North of England and Northern Ireland of approximately seven million people, and pointed out that the most economic method under which South Africa could enlarge her markets in this country was not by concentration on a port without a market in the South but by direct supplies and direct marketing in the markets of Liverpool and Glasgow. In this connection he drew some interesting comparisons regarding costs, and pointed out that by sending 180,000 cases of fruit direct to Glasgow last year there was an approximate saving to the South African producer of £25,000. Visualising an increase to half-a-million cases, this would mean no less than £100,000 extra for the producer, as against an equivalent wastage in port and transport costs on this side.

The Lord Provost also urged that South Africa should adopt the same means for her deciduous fruits, eggs, meat, tobacco, canned and dried fruits, etc.

Mr. du Toit, in giving his impressions upon his visit, stated that in his view there were definite potentialities in the Scottish market, and he realised that if South Africa was going to establish her products in that market she must adopt the most direct means of doing so, namely, by direct marketing and direct shipping, and so build up an increasing demand and enjoy the same satisfactory financial outcome as was the case last year. He realised that in the past, and to some extent to-day, shipping provided one of the difficulties, but he was optimistic that with the co-operation of the Clyde Trust, the next season or two would see a pronounced improvement. It was the definite policy of the interests in South Africa to develop direct shipments to Glasgow, and he looked forward to a progressive development from year to year. He was keen to get away from centralised marketing in London, and it was his fixed policy to get their products into the Northern markets by the most direct way possible, and he hoped by the utilisation of such British shipping lines as were already serving South Africa. There was no reason whatever why existing services should be ousted. At the same time, there was no reason why they should not be placed upon a direct service to the Clyde.